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January 2015
Issue 95

CANON EDITION

PhotoPlus

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 192-page eBook, Video Disc
 and Xmas gift guide
 See page 5

Hello and welcome to...

PhotoPlus

CANON EDITION

THE NO.1 CANON D-SLR PHOTOGRAPHY MAGAZINE!

PhotoPlus GUARANTEE

■ We're the only magazine in the newsagent that's 100% dedicated to Canon D-SLRs – making us 100% relevant to your needs.

■ We're 100% independent. We don't answer to Canon and don't rely on them for advertising – if Canon brings out a new camera or lens and it's rubbish, we'll say so!

■ We're all Canon D-SLR enthusiasts and between us we've got 200 years of photography experience. We're excited about passing on what we've learned – even from our mistakes!

■ We don't assume you're a millionaire. We focus on the Canon D-SLRs most people buy, and feature software and accessories within the average person's budget.

■ Our Video Disc has an unrivalled collection of D-SLR technique and Photoshop videos – which can be viewed via our digital editions too!

■ We are proud to feature some of the best writers and photographers in the business. Turn to page six to meet them all now!

Christmas is coming, as it tends to do at this time of year! To provide inspiration for which Canon D-SLRs, lenses or accessories you would love to find under the tree, then we have a whole festive feast of photo kit to choose from! First we have our Canon Gear of the Year awards, with all the very best EOS D-SLRs, lenses and kit from 2014 (p95); then there's our big eight-page Xmas Gift Guide pull-out (p55) with 43 ideas, from fun stocking fillers to bargain lens buys; and we have our Ultimate Test of the new Canon EOS 7D Mk II (p86), a brilliant new camera likely to be on every enthusiast's Xmas wish list this year. It's certainly on mine!

Also this issue our Canon pro shows an Apprentice how to use flash to capture dynamic action shots of high-flying snowboarders inside a snow centre (p8); we reveal all the best Canon photos from this year's Wildlife Photography of the Year competition (p22); and we bring you top tips and techniques for mastering the art of black and white photography, from setting up your Canon D-SLR to quick Photoshop edits (p28).

We have more great camera and Photoshop projects to try (from p39), including how to take great child portraits and how to create your very own personalised A4 photo calendar – then get it printed for just £5 (+p&p) with our exclusive 75%-off offer (UK only). Plus, find out about your three fantastic free gifts, over the page!

Peter

Peter Travers Editor
 peter.travers@futurenet.com



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Great print & digital edition subscriptions

Turn to page 20 for money-saving offers!





Issue #95
January 2015

PhotoPlus

THE INDEPENDENT MAG FOR **CANON PHOTOGRAPHERS**

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HOT ACTION IN THE COLD!

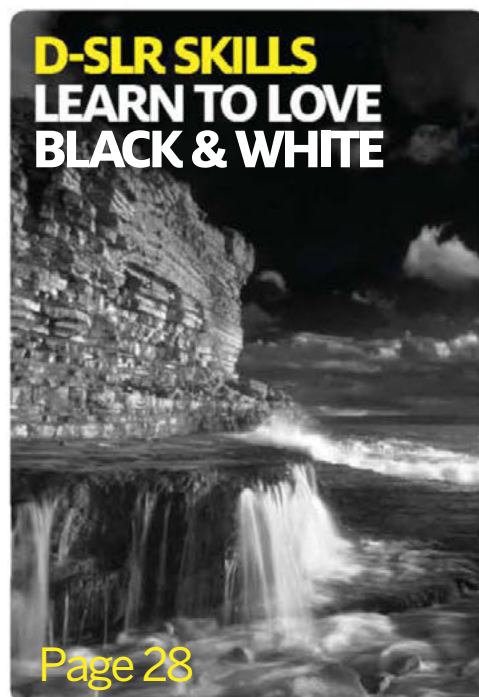
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AWARDS SPECIAL!

CANON GEAR OF THE YEAR

The very best Canon D-SLRs, lenses and photo accessories from 2014!

Page 95



3 FREE GIFTS!

GIFT 1

NEW VIDEO TUTORIALS

New Canon D-SLR and Photoshop projects!

To view our videos, click on the 'Watch the Video' badges that appear alongside the tutorials. Click on the badge to the right to see what videos are in store this issue...

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**GIFT 2**

CHRISTMAS GIFT GUIDE!

From fun stocking fillers to brilliant budget lenses, there's something for everyone (including you) in your free 8-page pullout guide

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GIFT 3

FREE BOOK!

The Flash Photography Field Guide, by Canon pro Adam Duckworth, is 192 pages and worth £8.99! Download your free eBook from www.ilexinstant.com/photoplus-flash





Meet the PhotoPlus Team

Who we are and what we want for Xmas – and our favourite festive tunes!



Peter Travers

Editor • EOS 5D Mk III
peter.travers@futurenet.com

"I've been a very good boy, so I'm hoping Santa brings me a 7D Mk II, after reading our review on page 86. My favourite festive song is Bing Crosby's rendition of *White Christmas*."



Adam Waring

Operations editor • EOS 7D
adam.waring@futurenet.com

"I'd like an EOS-1D X, EF 200-400mm f/4L, and the moon on a stick, please Santa. The Pogues' *Fairytale of New York* pretty much sums up my average Christmas eve. Cheers!"



Angela Nicholson

Head of testing • EOS 5D Mk III
angela.nicholson@futurenet.com

"Hopefully Santa will end my search for the perfect backpack; I want it to be flexible and light, but with huge capacity. And I'm a sucker for *Happy Christmas (War is Over)*."



Matt Richards

Technical writer • EOS 70D
photoplus@futurenet.com

"I'd like Santa's little helpers to knock me up a full-frame version of the 70D, while singing *Have Yourself a Merry Little Christmas* (even though it was way before my time)."



Hollie Latham

Staff writer • EOS 60D
hollie.latham@futurenet.com

"I love a handmade gift, so can someone knock me up a 'hunks in trunks' calendar? (See page 44.) I love driving home to Chris Rea's *Driving Home for Christmas*."



Martin Parfitt

Art editor • EOS 600D
martin.parfitt@futurenet.com

"I love the cool orange colour of the Lacie Rugged hard drive (Gift Guide, page 55). Slade's *Merry Xmas Everybody* is a solid rock track with no tinkly bells or children singing."

This issue's contributors...



James North

Need to practice your winter sports photography technique? James shows our Apprentice how to be dope on the slope at an indoor snow centre. Page 8.



James Paterson

James's mono portrait Masterclass (page 66) is just one of several tutorials this month that prove you don't need colour for stunning shots. Page 66.



Marcus Hawkins

Want to learn about long exposures? Of course you do! Our little Marcus reveals everything from camera set-up to key slow-shutter-speed techniques. Page 72.



Marc Aspland

The Times chief sports photographer explains why planning and position will only get you so far in sports photography – you'll also need a little luck. Page 114.

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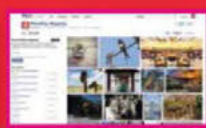
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I study for the love of the subject. OCA has pulled me out of my creative comfort zone, made me think differently and expanded my vision. There is an entire world of photography out there that I never knew about until I came across it as part of my studies. I never feel like I am being directed to go a certain way or follow a certain path. The feedback from each of my tutors has been pure gold.

Brian Cooney
Photographer

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THE APPRENTICE...

Name: **Paul Kerr**

Camera: **Canon EOS 60D**

Paul, 57, is a commercial team leader for Sainsbury's. Based in Bournemouth, he's been a keen amateur photographer since his teens. His first Canon was an EOS 600 film SLR, he went digital with a 300D, and has since upgraded to a 60D. He asked for our help to improve his snowboarding and skiing shots, and was interested in learning more about flash. We were only too happy to help!

THE PRO...

Name: **James North**

Camera: **Canon EOS 5D Mk II**

James is a 32-year-old professional snowboard and travel photographer based in London. He is also a senior staff photographer for *The Reason* snowboard magazine, travelling around the world as he shoots some of the world's best snowboarders up in the mountains and snowboard parks. He began his photographic career in 2004 with a Canon EOS 20D, and now loves shooting with his full-frame 5D Mk II cameras. Check out his awesome portfolio at www.jnorth.co.uk

Your chance to shoot with a pro



Freeze the action with flash!

Learn how to use flash to capture dynamic winter sports shots as our Apprentice spends an evening with a Canon pro inside Milton Keynes Snozone ▶

Words **Pete Travers** Location shots **Adam Gasson**



JAMES'S TIP

High-speed driving

"If I'm shooting without lights, and have pumped up the ISO for a fast shutter speed, I'll also use my Canon D-SLR's High-speed Continuous drive mode when shooting riders (snowboarders) on the slopes," says James, "It enables me to capture that split-second when a rider is at the pinnacle of a trick, and also gives more choice to pick the best shot from a sequence of the same movement. I start shooting before the 'peak' moment and continue firing afterwards to ensure I get the shot."

PhotoPlus Technique assessment Is Paul ready to go snowboardin' UK?

Talented Canon pro James helped *PhotoPlus* Apprentice Paul with his D-SLR settings for better action



Manual mode setup

"Paul generally used Av mode on his Canon 60D, which is fine when you only want to control the aperture, but not when you want to set the shutter speed too," advises James, "I gave him the confidence to shoot in Manual mode so he can boss aperture, shutter speed and ISO, using the exposure level indicator as a guide. It also means your exposures are consistent for your subject, regardless of bright or dark elements elsewhere in shot."



Autofocus point setup

"I encouraged Paul to use the central AF point as it's the most responsive, and you can focus then recompose when you want to position a rider off-centre for a more exciting composition," says James. "I also advised he isolate focusing from the shutter button, instead focusing with the 'AF-On' button; you can then pre-focus on a rail or kicker (jump) you know a rider will hit, then simply concentrate on firing the trigger at the optimum moment."



KILLER KIT OF THE PROS #1 Fast zoom lenses

"Fast zoom lenses are essential for any action photography, but are even more indispensable for indoor sports when light levels are low," says James, "So I always carry my go-to zooms on a shoot; a standard EF 24-105mm f/4L IS USM that's wide and long enough on my full-frame 5D Mk II, and also a 70-200mm f/4L IS USM that was great value *and* is really sharp. A lens with a constant aperture of f/2.8 or f/4 means you can obtain a faster shutter speed to freeze any movement in your fast-action subjects, or let more light in when using flash."

JAMES'S TIP



Raw power

"It's good practice to shoot in the Raw image quality setting for all photography," says James, "But shooting in Raw is crucial when shooting in mixed lighting and when using flash as you'll want to ensure your white balance (WB) is spot on for accurate colours. I use Daylight WB setting to match the flash, but with Raw images, you can tweak the colour temperature very easily in the Adobe Camera Raw editor afterwards for the best WB results."



▲ Paul's comment

"This was the first round of shots when I was using a high ISO setting rather than flash to shoot rider Ollie. I really noticed the limitations of my 60D as I had to shoot at ISO2500 to get a shutter speed of 1/400 sec, so it was fast enough to freeze the snowboarders in midair. The shot is very noisy, although fine if used at this size. And this was when I borrowed an EF 24-70mm f/2.8L lens from *PhotoPlus* – my own EF 28-135mm f/3.5-5.6 was way too slow, only giving me a shutter speed of 1/100 sec at ISO2500. But as a first effort I'm pleased with my timing and composition!" ►

EXPERT INSIGHT

Lights, camera, action!

"For using flash with indoor action, a good starting exposure is around 1/200 sec at f/5.6 and ISO400. When using flash, *always* shoot in Manual mode so you can independently adjust aperture and shutter speed. You'll need a fairly wide aperture as light levels are pretty dark, and you're limited to a maximum shutter speed of 1/200 or 1/250 sec to sync with your flash – but remember it's the incredibly brief burst of flash that will capture the rider sharply," explains James. "With your aperture and shutter speed set, you then simply adjust your flash power to light your subject. Use Manual flash too; start at 1/4 power and go up or down, depending on the distance to the rider. Adjust the ISO to 'project' the flash more; the higher the ISO the lighter the background."



KILLER KIT OF THE PROS #2

Flashguns and triggers

"You'll get far better results if you use off-camera flash as you can light riders from any angle, and create more depth with side shadows, plus you can shoot safely from farther away," reveals James. "I use two Canon Speedlite 580EX flashguns, fired by Pocket Wizard Plus II wireless radio triggers. Paul's 60D has a pop-up flash, which can be set to fire flashguns wirelessly too. I also use Manfrotto light stands for my flashguns."



THANKS EVERYONE!

Many thanks to Milton Keynes Snozone

(www.xscape.co.uk/milton-keynes) for allowing us to shoot all evening – it's a first-class indoor snow centre with good facilities and ideal for beginners and experienced snowboarders. We'd also like to thank our four pro riders; Ollie Dutton, Chris Chatt, Neil Campwell and Sparrow Knox.

► Paul's comment

"For this shot we used a flashgun set to 1/4 power mounted on my 60D. James showed me that, by pointing the head of the flashgun directly upwards and popping out the catch-light panel, it would bounce the light up and off the ceiling for a softer overall lighting effect, as well as a greater spread and brighter surroundings in shot. We also set the ISO to 1600 to further extend the flash lighting effect. It only took a few attempts to capture Neil jumping over this rail, which we shot from down low to accentuate the jump and reduce people in the background."



Exposure: 1/160 sec at f/4; ISO1600
Lens: Canon EF 24-105mm f/4L IS USM

HOT SHOT #3



Exposure: 1/160 sec at f/6.3; ISO800
Lens: Canon EF 15mm f/2.8 Fisheye

▲ Paul's comment

"James let me use his fisheye lens on his 5D Mk II full-frame camera for this shot (using it on my crop-sensor 60D wouldn't have captured the full fisheye effect). The fisheye was great fun to use, once I got used to getting so close to the riders. We asked rider Sparrow to do a 'nosespress' on this rail, and James explained the pinnacle of this trick was more towards the end of the rail. We used two off-camera flashguns left and right, and reduced the ISO to 800 to tone down the brightness behind. When using flash, I found my images didn't need much editing as the colours, contrast and sharpness are already there!" ►

KILLER KIT OF THE PROS #3

Fisheye's view

Not just for big landscape shots, a fisheye lens is a great tool to make action shots look really dynamic. "With a 180-degree angle of view you can fit so much in your frame when using a fisheye lens on a full-frame camera like my 5D Mk II," says James, "I love the way it distorts and exaggerates shapes, making boards and riders bigger, bending straight lines. Depth of field is huge, too, even at wide apertures around f/5.6, so you know the whole scene will be sharp."





JAMES'S TIP

Be warm and safe

Dress in warm, winter clothing, from jackets and overtrousers to hat, gloves and snowboots. "Inside the snow centre it was -10°C, and you'll soon get cold when stood around shooting. Use common sense: don't put yourself in any dangerous positions or get in the riders' way. Stand to the side of kickers and rails, and never have your back turned towards people hurtling down the slope."



PAUL'S TIP

Are they Goofy?

"James explained to watch riders making a few runs to work out if they're Regular (left-foot leading) or Goofy (right-foot leading). That way you can plan which side to stand on the slope when you're shooting, to ensure you get them with their body and face towards you in shot, rather than their backside!" smiles Paul.

UK SNOW CENTRES

While you can't beat the crisp blue alpine skies and natural backdrops of pine-clad mountains, the UK's six indoor snow centres are a great place to hone your winter sports photography techniques, but check their photo policies before you go:

- Snozone** Milton Keynes and Castleford www.snozoneuk.com
- Snow Factor** Glasgow www.snowfactor.com
- Snow Centre** Hemel Hempstead www.thesnowcentre.com
- SnowDome** Tamworth www.snowdome.co.uk
- Chill Factor** Manchester www.chillfactor.com

JAMES'S KIT LIST

Here's professional snowboard photographer James's Canon kit list

- 2x Canon EOS 5D Mk II bodies
- 2x Canon BG-E6 battery grips
- Canon EF 15mm f/2.8 Fisheye
- Canon EF 24-105mm f/4L IS USM
- Canon EF 70-200mm f/4L USM
- Canon EF 50mm f/1.4 USM
- 2x Canon Speedlite 580EX flashguns
- 3x Pocket Wizard Plus II triggers
- 2x Manfrotto 1051BAC light stands
- Elinchrom Ranger Quadra lighting kit



▲ Paul's comment

"By getting down low and below this kicker, it's helped to emphasise how high Ollie is jumping. I was shooting with a 70-200mm f/4L telephoto zoom, which has dropped the background elements out of focus a little, plus a lower ISO of 400 has meant the background is underexposed and much darker; both these factors help to retain the focus on the rider and kicker, which have been lit by the off-camera flash positioned on a stand to the left. When processing the Raw image I dropped the colour temperature to make the image bluer and cooler, to emphasise the cold and add to the mood."

James's cool action shots

Professional snowboard photographer James North shows off a selection of his coolest flash-lit photos, both on and off the slopes...



Ruama Park, Austria

1 "I was invited to shoot at a private snowboard park set in the Zillertal valley with local professional snowboarder Peter Konig. Here I used colour gels to give the shot a different look and feel."



Grindhouse Crew

2 "This was taken whilst finishing up filming with the Grindhouse Crew for the season at Lake Tahoe, California. I had seen these old train tunnels at Donner Pass and knew they would make a great location for a crew portrait."



Too close for comfort

3 "The teams test equipment on a glacier at Kaunertal, Austria every spring. This is Vans team rider, Chris Chatt, doing a handplant dangerously close to my lens."



SHOT OF THE DAY

Paul's comment



"I had a great time shooting all the snowboarders and learned so much about using flash for better action shots. With our

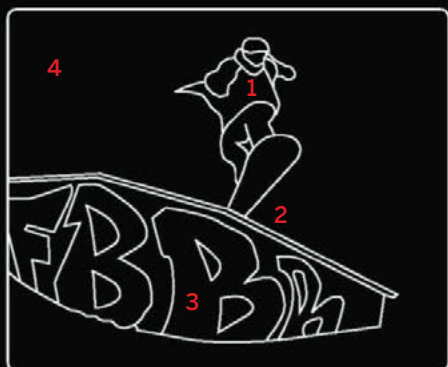
exposure and lights set manually for this shot of Ollie I just needed to get down low for a more interesting composition, and then time it right when I pressed the trigger. I was amazed at the depth of field the 15mm fisheye lens captures – even shooting at f/5.6 and focusing on the rider in the foreground, the background wall is totally sharp too."

James's verdict



"Even in the freezing cold snow centre Paul was able to capture some hot action on the night! He was a game Apprentice and applied himself fantastically. Getting

in close [1] for this shot has paid off and Paul has captured a really in-your-face action shot. His timing is spot on and he's captured the pinnacle [2] of Ollie's frontside boardslide. The fisheye lens has worked its magic and you can see how its distorted the rail to great effect [3]. And his exposure is excellent, with the lower ISO at 400 rendering the background darker [4] to keep your eye on the rider." ■



Exposure: 1/200 sec at f/5.6; ISO400
Lens: Canon EF 15mm f/2.8 Fisheye



Be our next Apprentice!

Do you need some help to take your Canon photography to the next level? Let us know what you'd like help with and we could pair you up with a top pro for the day. Send us an email to photoplus@futurenet.com with 'PhotoPlus Apprentice' in the subject line, and include your telephone number and address.





PhotoPlus Your Letters

Send us your comments on the magazine, and photography in general. Drop us a line any time at photoplus@futurenet.com



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Etiquette of the pros

I read with interest a letter in the November issue 93 of *PhotoPlus* magazine from Robert Breeze of Derbyshire in which he talks about his view being obstructed by professional photographers. I agree, some pro photographers I've come across can be like that, but I normally find that areas for the press are barriered/roped off from the public.

I would say, though, that when I'm working a paid shoot, I also try to respect other photographers, including members of public who are generally entitled to get their own shots. Simply ask them if they'd mind moving a bit for a few minutes.

Mike Pitches Plymouth

Dull, dull, dull

I purchased the November edition of *PhotoPlus*, and I thought that the double page photograph on your opening pages of the Inspirations gallery was one of the most uninspiring photographs I have seen in your magazine in a long while. Dull, boring and uninspiring, the sort of image I would have deleted. I would not want it hanging on my wall. The photographs on the following pages were far and away more superior.

Malcolm J Preston-Green Appleby, Cumbria

Thanks for the candid feedback. As we all know, photography is very subjective. We rather liked Stephen



Professional operators

The letters page often has comments about how the pros only get good pictures because they have top-of-the-range equipment, but as we all should know, the most important part of the camera is the person holding it. How about occasionally sending one of the pros out with a base model and kit lenses to take pictures from the sort of places Joe Public could get to – no special-access privileges? This should prove once and for all that anything is possible; it's all down to the photographer and there's no need to spend a fortune to get good shots.

At our local camera club, one competition used to be everyone took three pictures with a £20 Russian camera; it always showed who the better photographers were, and that pricy equipment isn't everything!

Michael W Morris Oxon

A fun idea, Michael! The professional dance photographer in our Apprentice (issue 93) preferred using Canon EOS 550D cameras, so not all pros rely on top-end kit.



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Spencer's Hagley Fields shot, which is why it made it into our top ten, as well as being voted in the top ten by the Photocrowd public vote. Everybody can enter our current competition and also vote on images by going

Malcolm hates this image; we like it. What do you think?

to www.photocrowd.com. What did everyone else think of the photo?

Lightroom Love

I used to be a committed user of Photoshop, but was lucky enough to be bought a copy of Lightroom recently. As an enthusiastic amateur I never felt I used the full capabilities of Photoshop, but had not found anything else that would give me the



Teach Yourself Lightroom offers a great way to get up to speed

features that I wanted. Cue Lightroom. Not only does it give me sufficient photo-editing for everyday use, I'm finding that it has hidden qualities and capabilities that are extremely useful.

In particular library management and organisation are most helpful, and the photo-editing in Lightroom has proved to be great. There are loads of free presets and plug-ins available online for Lightroom that give you a huge range of options in 'massaging' your images. And guess what – Lightroom has an excellent interface for managing your images within Flickr

and provides a seamless method for uploading, updating and structuring your albums. Can we have more articles on Lightroom in your excellent magazine please.

Mike Grundy Chelford, Cheshire

Thanks Mike, yes, there are a growing number of Lightroom lovers, and we'll be running more Lightroom tutorials in future issues. For those wanting a fix now, check out our 50-video Teach Yourself Lightroom DVD course at <http://bit.ly/>

tylrdvd (£19.99); which is also available as an iPad App video course (£11.99), or as a 220-page digital edition handbook (£6.99) – both of which can be bought from the PhotoPlus app that you can download from Apple's App Store.

New mag offers

I have just received my subscriber copy of *PhotoPlus* (December, issue 94) and have noticed that there is no 'Subs Club' section in the magazine. Have I been sent the wrong version or is there only one version now?

Ray Stockwell Rainham, Kent

That's correct, Ray – subscriber and newsstand editions are now

identical. We felt it a shame to restrict our 'Subs Club' offers only to subscribers, and wanted to share them with all our readers – so we have a new semi-regular Reader Offers page, see page 84 this issue. We will be bringing you offers and discounts in other areas of the magazine in the future, too, so look out for them! We're offering a massive 75% off photo calendars this issue (UK only), see page 44. ■

Our cracking offers are now available to all our readers, not just subscribers...




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 Our new Canon iPad and iPhone app is ideal for those using a Canon D-SLR for the first time – and who want help knowing what settings do what. Learn all the basics through 40 short videos that take you through everything a step at a time. <http://bit.ly/1rOGkay>

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how to shoot with
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 How to get sharp photos when using a telephoto lens. <http://ow.ly/EpuZs>



 6 quick fixes for common photography mistakes. <http://ow.ly/EhDU5>

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The Manfrotto Agile Sling bag is perfect for on-the-go shooters. Designed to fit your Canon D-SLR with a midrange zoom lens attached, plus a couple of additional lenses and accessories, there is even a compartment for personal items such as books and sunglasses. The Agile bag provides straps on the front to secure your tripod, and there's a quick-draw flap for easy access to your D-SLR. Combining comfort and style, this bag is designed to help you get your gear to the perfect photo spot.

OFFER 4

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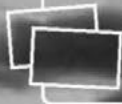
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PhotoPlus Inspirations



PhotoPlus Inspirations

Stunning imagery from the world of Canon photography





The Last Great Picture by Michael 'Nick' Nichols

"I set out to create an archetypal image that would express both the essence of lions and how we visualize them – a picture of a time past, before lions were under such threat. Here, the five females of the Vumbi pride – a formidable and spectacularly cooperative team – lie at rest with their cubs on a kopje (a rocky outcrop), in Tanzania's Serengeti National Park. Shortly before I took the shot, they had attacked and driven off one of the two pride males. Now they were lying close together, calmly sleeping. They were used to my presence – I'd been following them for nearly six months – which meant I could position my vehicle close. I slowly stood up, through a hatch in the roof, to frame the vista with the Serengeti plains beyond and the dramatic late-afternoon sky above. I photographed them in infrared, which cuts through the dust and haze, transforms the light and turns the moment into something primal, biblical almost."

Camera: Canon EOS 5D Mk III **Lens:** Canon EF 24–70mm f/2.8L USM **Exposure:** 1/250 sec at f/8; ISO200 ►



LEFT

Touché by Jan van der Greef

"A focus of my trip to Ecuador was the astonishing sword-billed hummingbird – with a bill longer than its body. Its 11cm (4.3in) bill is designed to reach nectar at the base of equally long tube-shaped flowers, but I discovered that it can have another use. One particular bird had a regular circuit through the forest, mapped out by its favourite red angel trumpet flowers and bird-feeders near my lodge. To get to the bird-feeders, it had to cross the territory of a fiercely territorial collared inca. Rather than being scared off, once or twice a day it used its bill to make a statement. To capture one of these stand-offs, I set up multiple flashes to freeze the hummingbirds' wing-beats – more than 60 a second – and finally captured the precise, colourful moment."

Camera: Canon EOS-1D X **Lens:** Canon EF 400mm f/2.8L IS USM **Exposure:** 1/250 sec at f/22; ISO100

BELOW

The Price They Pay by Bruno D'Amicis

"A teenager from a village in Tunisia offers to sell a three-month-old fennec fox, one of a litter of pups he dug out of their den in the Sahara Desert. Catching wild foxes is illegal but widespread, yet I'm convinced that change is possible – and that thought-provoking images can help raise awareness among tourists as well as highlight what's happening to the fragile Sahara Desert environment."

Camera: Canon EOS 5D Mk II

Lens: Canon EF 17–40mm f/4L USM

Exposure: 1/160 sec at f/4; ISO400

RIGHT

Anglepoise by Marc Albiac

"I'd been helping my grandmother tidy her garden when I spotted the conehead mantis among the brambles. But it blended so well with the background that my first pictures failed to show the exquisite detail of the animal. So I taped up a sheet of white paper behind it, and bounced one flash off the paper, revealing the insect's extraordinary shape, colour, posture and behaviour in the perfect portrait."

Camera: Canon EOS 5D Mk III

Lens: Canon EF 100mm f/2.8 Macro USM

Exposure: 1/100 sec at f/18; ISO320



Owlets United by Sitara Karthikeyan

"When photographing waterbirds by a coconut grove in southern India, I was excited to spot three spotted owlets perched on a dead tree, preening one another. Two adults then joined them and all five stood together. To get an eye-level shot, I was forced to abandon my tripod and handhold the camera, which was challenging, as the lens was so heavy. Selecting a wide aperture to blur the background, I focused on the owls. Then, at the first click of the shutter, they all looked my way for this shot."

Camera: Canon EOS-1D Mk IV **Lens:** Canon EF 300mm f/2.8L IS USM + Canon Extender EF 2x
Exposure: 1/400 sec at f/5.6; ISO640



LEFT

Cool Heat by Juan Jesus Gonzalez Ahumada

"A huge agave was growing near my parents' house in Sierra Blanca, southern Spain, and as this weighty leaf had grown it had curved over and started to split. Now it was about to be destroyed in a controlled burn, lit to prevent flash fires in summer. Struck by the contrast between the cool blue of the leaf and the warm light from the fire 'seeping through the wound', I had to work quickly. Its colour was darkening and its smooth texture deteriorating fast in the heat. I used a 'cool' white balance to enhance the leaf's blue tone and a flash from the side to emphasise the cracks and give more contrast in the early evening light, but I managed just a few shots before the effect I wanted – like a sheet of ice with fire below – was spoiled by the blaze."

Camera: Canon EOS 7D **Lens:** Canon EF 100mm f/2.8 Macro USM
Exposure: 1.6 secs at f/8; ISO100



RIGHT

Night Stalker by Javier Aznar González de Rueda

"Exploring the dunes of Oman's Wahiba Sands one night in search of reptiles, I came across a xerxes huntsman spider, about 10cm (4in) across, out hunting, probably for geckos or invertebrates. Huntsman spiders have relatively poor vision but an excellent sense of vibration. This one was fast and didn't hesitate to defend itself, jumping right onto my boot. I wanted to show the habitat that it lives in – not so easy in the dark, with a fast-moving subject and sand blowing all around. Highlighting the background with a flashlight, I quickly set up my camera and wide-angle lens. At first, the spider raised its legs defensively, but then it calmed down, allowing me to take a low-level shot of the hunter in its environment."

Camera: Canon EOS 600D **Lens:** Sigma 15mm f/2.8 EX DG Diagonal Fisheye **Exposure:** 15 secs at f/20; ISO200 ►





LEFT

Sunrise Performance by Tim Laman

"Birds of paradise spend most of their time in the dense rainforest, so images usually have to be taken with telephoto lenses. But I wanted to show a bird performing against the backdrop of the rainforest, which meant a treetop vista and a wide-angle lens. I found a display tree overlooking the forest of Wokam Island, Indonesia, where several greater birds of paradise performed. Climbing into the canopy of a neighbouring tree, I built a leaf-covered hide from which to watch the action. I climbed the display tree before dawn, mounted my camera (camouflaged with leaves and with a laptop lead strung over to the hide tree) and focused on where a male was likely to display. From my hide I could then watch and wait, controlling the camera from my laptop. The male performed regularly just before dawn and from the same perch. But it was only at this particular sunrise that quite such an amount of mist rose in the distance."

Camera: Canon EOS 7D **Lens:** Canon EF-S 10-22mm f/3.5-4.5 USM

Exposure: 1/125 sec at f/8; ISO400

RIGHT

Snake-eyes by Marc Montes

"I was trekking through the forest in the Val d'Aran, northern Spain, when I was thrilled to come across a large grass snake. The snake, just over a metre (three feet) long, was very alert and started moving, and the light was very poor. So I had to use a wide aperture, giving only a very shallow depth of field. I only had only a moment to compose the picture, but managed to take a portrait with the focus on the key part of the snake – its eyes."

Camera: Canon EOS-1D Mark IV **Lens:** Canon EF 100mm f/2.8 Macro USM **Exposure:** 1/250 sec at f/4.5; ISO800



Wildlife Photographer of the Year 2014

These are some of the winning Canon photos from the 50th Wildlife Photographer Of The Year. All the finalists are on show at the Natural History Museum, London, until 30 August 2015. More details at www.nhm.ac.uk/wpy



LEFT

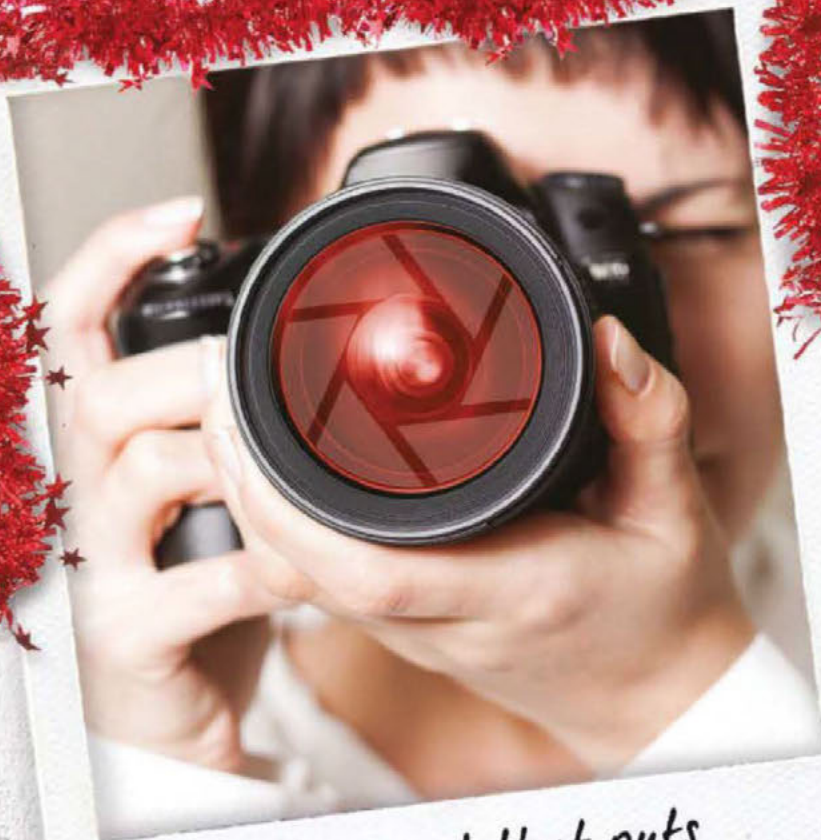
The Mouse, the Moon and the Mosquito by Alex Badyaev

"As the moon rose, I was entertained by dozens of small animals exploring this puffball. The most frequent visitors were deer mice, which scampered across its surface. I used the moon as backlighting, relying on a long exposure and a gentle pulse of flash to show the curve of the fungus and freeze the frantic activity. When one mouse paused for a moment to investigate the mosquito, it provided the perfect midnight puffball scene."

Camera: Canon EOS-1D Mk IV
Lens: Canon EF 24-105mm f/4L IS USM
Exposure: 2.5 secs at f/14; ISO250 ■

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LEARN TO LOVE BLACK & WHITE PHOTOGRAPHY!

Master the art of monochrome, from the subjects to shoot to taking control of your conversions

Shooting great black-and-white images isn't just about converting your images in Photoshop CC/CS or Elements, it starts before you press the shutter release on your Canon D-SLR. Choosing the right subjects and lighting conditions is the first step, and bright sunny days can be perfect for mono shots. Next, it's essential to set up your camera correctly for the best results and get a

better idea of how the final image will look before you shoot. However, we can't promise that you can do everything to get stunning mono images in-camera, so we'll look at some basic software techniques that you can use to improve your shots.

Follow our advice and you'll get better results and save yourself time by using the right settings and shooting techniques. ▶



YOUR FIRST STEPS

Viewing the world in mono isn't natural. Learn how to set up your D-SLR to see how removing colour will affect your images

Shooting black and white when it's bright and sunny may seem counter-intuitive, but there are plenty of reasons it's a great option. Bright sunshine creates strong shadows, which produce really striking black-and-white images. Similarly, fluffy white clouds against a blue sky can look stunning in mono. However, the high-contrast light produced by intense, direct sunshine does mean

that you have to pay attention to your exposure. In general, you should try to keep detail in the highlights, in the same way that you would when shooting colour images.

Shades of grey

One of the trickiest aspects of shooting in black and white is understanding how the colours in the subject will translate into different shades of grey in your final

image. Selecting the Monochrome picture style gives you the ability to see exactly how your shot will look.

Once you've selected the Monochrome picture style, you can preview how the image will look by using Live View, rather than through the optical viewfinder. You can also review your images in black and white to give you instant feedback for those that will work in mono, and those that won't.

How to... shoot in JPEG and Raw

Just like any picture style, the Monochrome effect is only permanently applied to JPEG images, not Raw files. But if you open a Raw file in Canon's own Digital Photo Professional software, the image will appear in black and white, as the software will recognise that you selected this picture style in-camera. You will then have the option of whether to keep the Monochrome style – or cancel it and produce a colour image instead.

Mono conversion

If you open the Raw file in a different photo-editing program, such as Photoshop CC, Elements or Lightroom, the software won't recognise the picture style information. This means the image will appear in colour and you'll have to convert it manually. Elements' Adobe Camera Raw (ACR) interface does not have any black-and-white conversion options, so you'll have to open the image into the main edit window to produce the conversion.

In Photoshop and Lightroom you can apply a black-and-white conversion with ACR's adjustment tools. Shooting with JPEG+Raw selected gives you the best of both worlds, as the JPEG files will be black and white, while the Raw files will give you the option of producing either colour or black-and-white variants.



Raw conversion

Converting this image from a Raw file, using the individual colour control sliders in Lightroom to increase the contrast between the blue sky and the white clouds, produced a more punchy result than the in-camera black-and-white settings.



In-camera JPEG

The high-contrast lighting and graphic lines of this building meant that the JPEG image using the in-camera Monochrome picture style setting produced a good black-and-white shot straight out of the camera. So there was no need to process the Raw file to get the final result.



STEP BY STEP

Monochrome picture style

Set up your Canon D-SLR in Monochrome mode to see how shots will look in B&W



Set the picture style

1 You can set the Monochrome picture style from the Quick Menu. For your first steps in black and white, leave it on the default settings, without any filters or toning applied to the image.



Switch to Live View

2 Using Live View, instead of the optical viewfinder, will enable you to preview the scene in black and white. This makes it much easier to get a feel for how the tones and colours in the scene will translate into monochrome.



Take a test shot

3 Even though Live View can give you a good idea of how the image will look, you will find that taking a test shot and reviewing it on the rear LCD will often make it easier to really assess the success or failure of the image in black and white. ▶



WHAT WORKS IN BLACK & WHITE!

Choosing the right scenes, lighting and shooting techniques will help you get great black-and-white shots in-camera



The key to successful black-and-white images is a combination of finding the right subjects, the right lighting and also some simple camera techniques. Let's start with how to spot subjects and scenes that will work well in mono.

The first step is recognising the best lighting conditions. One of the essential elements in adding impact to your images is the contrast between light and shade. Bright sunlight is perfect for creating dark shadows, which create strong lines and graphic elements for your mono shots. To make the most of the shadows, try shooting with the sun just behind the subject so that the shadows are in the foreground of your image. You don't have to stop there, though, as you can

also use these shadows as a subject in themselves. Shooting just the shadow, rather than the subject that has created it, can produce abstract and surreal black-and-white images.

Textures and tones

As well as strong, graphic elements, a more subtle appearance of textures and tones can also help to add depth and interest to monochrome images. Strong side lighting on a bright, sunny day will help to bring out texture in the subject, while a softer, more diffuse light, such as shooting when it's cloudy, is best for capturing subtle tones.

Because you can't use colours to help the composition, black-and-white images can appear much flatter and less interesting than the scene in front

ABOVE
Strong side lighting helps to bring out the texture and creates dark shadows for maximum impact

of you. Using the Monochrome picture style will help you to get a good idea of how the scene will look in black and white, but remember that you can also add impact to your images by increasing the contrast. You can do this both in-camera, using the sliders in the picture style settings, or in software. But even the most skilful image processing isn't a substitute for good camera technique, composition and the right lighting conditions.

“Shooting just the shadow, rather than the subject that has created it, can produce abstract images”



ABOVE

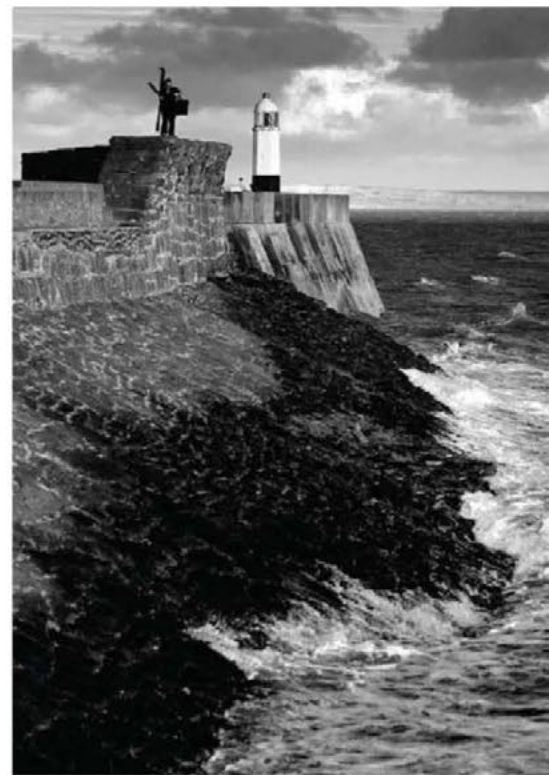
Try shooting just the shadows created by the subject, rather than the object that created them, to produce simple, graphic black-and-white images

TOP RIGHT

Look for subjects with contrasting textures, such as the wall, foliage and clouds in this shot, to create a real sense of depth and interest to your black-and-white shots

RIGHT

In black-and-white images it's often the darkest elements that draw your attention. The dark figure of the fisherman is a much stronger focal point than the white lighthouse



...And what doesn't work in black and white



Sunrise/sunset

You will lose much of the impact when the colours and tones are crucial to the mood of a scene, such as sunrise or sunset.



Colour contrast

Scenes that rely on strong colour contrasts, such as the red poppy in this shot, don't work well in mono. ▶





ADD DRAMA TO B&W SHOTS IN-CAMERA

Rather than relying on Photoshop, it's often easier to use a few simple techniques to add contrast and drama when you actually take your shots

LEFT

Using a polarising filter has darkened the blue sky in this scene, boosting the contrast and impact

Back in the days of film, you could control the way that different colours were translated into black and white by using coloured filters in front of the lens. Each filter lightens the colour specified by its name, and also darkens the opposite colours. So, for example, a red filter lightens any red areas, but darkens the blues. But these traditional filters don't work with digital cameras. Instead, you can alter the contrast of your black-and-white images by using the filter effects that are available in the Monochrome picture style menu.

Filter effects

These filter effects give the same results as traditional filters, lightening areas that are the same colour as the 'filter' and darken areas of the opposite colour. For example, using a red filter effect will produce a black-and-white image where the blue areas are dark, and yellow and red areas much lighter than a normal black-and-white image.

Try in-camera filters



Yellow

Lightens yellow and slightly darkens blues. Use it for lightening skin tones or adding contrast to white clouds against a blue sky.



Orange

Lightens orange and darkens blues a little more than yellow. Use it for adding more contrast to blue skies than with the yellow filter setting.



Red

Lightens reds and darkens strong blues to almost black. Use it for adding maximum contrast to skies in your landscape and outdoor shots.



Green

Lightens greens and darkens yellow and orange. Use it for darkening skin tones in portraits and lightening foliage and grass in landscapes.

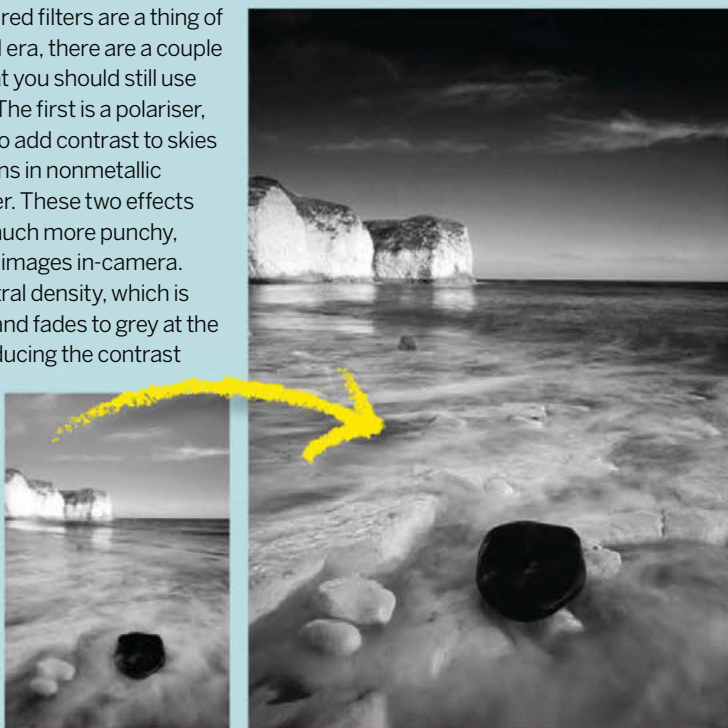
“Alter the contrast of your black-and-white images by using the filter effects that are available”

Real filters for black and whites

While screw-in coloured filters are a thing of the past in the digital era, there are a couple of physical filters that you should still use for the best results. The first is a polariser, which can help you to add contrast to skies and cut out reflections in nonmetallic objects such as water. These two effects will help you to get much more punchy, high-contrast mono images in-camera.

A graduated neutral density, which is clear at the bottom and fades to grey at the top, is perfect for reducing the contrast between the sky and foreground, which can save you loads of time processing your shots to darken the sky or lighten the foreground.

An ND grad filter will help you avoid overexposed skies



Preset filters

Save your black-and-white filter effects as user-defined presets for quick access



To create a user-defined picture style, select one of the three 'User Def' presets from the Quick Menu screen. Press Info, then scroll through the Picture Style menu to Monochrome. You can then adjust sliders for Sharpness and Contrast, and select a Filter Effect (Yellow, Orange, Red or Green) and also a Toning Effect – to give your images a Sepia, Blue, Purple or Green tint. ►



B&W EDITING TIPS

Add impact to mono images by adjusting contrast and tones

The biggest problem with in-camera black and white is contrasting colours can end up with a similar tonal value in your images. For mono images with real bite, you'll need to use Photoshop's black-and-white adjustment tools, which enable you to control how individual colours are converted into black-and-white tones using sliders.

Duplicate the 'Background' layer before you start, so you can always return to the original, and also check how the adjustments compare. To change your colour image to black and white in Elements, go to

Enhance > Convert to Black and White. This will open up a new window that contains a whole range of presets, along with the manual controls for adjusting the red, green and blue intensity, and contrast.

Further improvements

Once you have converted your images, you can also use either Levels or Curves (CC, CS or Lightroom only) adjustment layers to fine-tune the contrast and tones in your black-and-white shots.

Photoshop's Dodge and Burn tools replicate traditional darkroom

techniques to selectively darken or lighten areas of the image. The Dodge tool allows you to lighten tones, while the Burn tool darkens them. You can choose whether it affects the shadows, midtones or highlights, giving you the option of increasing or decreasing the contrast in these areas.

You need to build up adjustments gradually to make them as seamless as possible; ensure that the Exposure amount is low, such as 2% or 3%, then brush over the area of the image you want to work on with a soft-edged brush of a suitable size.

Elements' B&W presets

Although the preset options are designed for specific subjects, such as portraits and landscapes, it's often worth trying them on any type of image before you start adjusting the colour sliders, as they will give a good starting point for your conversion.



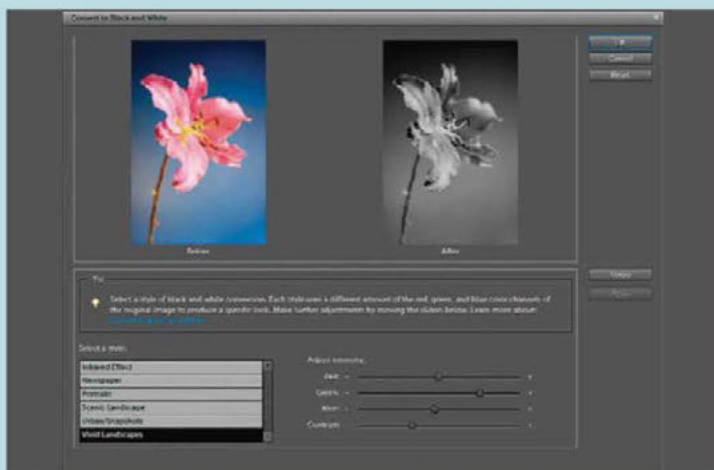
Portrait

This preset converts the image so that the reds are slightly darker than the greens and blues.



Scenic landscape

With this preset the conversion sliders are set so that the blues are darker and reds are lighter.



Custom settings

While the presets give a good starting point for your conversions, you can also drag the individual sliders to fine-tune the results. For our flower shot we wanted to darken the petals, so we dragged the Red slider left until the majority of the petals were a mid-grey or darker. The rest of the image was too dark though, so we dragged the Green slider right until the image had a full range of tones, from black to white.

The Levels sliders



Highlights

These are controlled by the white triangle on the right-hand side of the histogram. The most common adjustment is to drag this to the left until it just meets the end of the graph. Drag it further left and you will lose detail in the highlights.



Shadows

These are controlled by the black triangle on the left-hand side of the histogram. Dragging this to the right darkens the shadows, but it's a good idea to drag it slightly inside the end of the histogram to make your images look punchier.



Midtones

Along with the highlights and shadows controls, Levels also enables you to darken or lighten the midtones using the grey triangle in the middle of the histogram. To darken the midtones, drag to the right. Drag to the left to lighten them.

STEP BY STEP How to dodge and burn



Choose the tool

1 Once you have created a duplicate 'Background' layer, select the Dodge or Burn tool from the Tools panel.



Adjust the highlights

2 Choose Highlights and you can darken the highlights to reduce contrast, or lighten them to increase it.



Adjust the shadows

3 Choose Shadows and you can darken areas of shadow to add more contrast, or lighten them for less. ■



Teach yourself Black & White Photography

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Elements is a more powerful editing program than its low price suggests. We help you unlock its full potential



Teach yourself Raw in Photoshop

Serious photographers shoot in Raw... We give a complete guide to unleashing the power of this professional file format



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Hollie Latham
Staff writer
hollie.latham@futurenet.com

Welcome...

Have you finished your Christmas shopping yet? No! Well, we might just be able to come to the rescue... This issue we'll show you how to put together a photo calendar with a popular online printing service – all you'll need is a dozen of your favourite shots and an internet connection. Populate it with pictures of the kids and get your order in *now* and it should be here in time for the big day. And as we've negotiated a huge 75% discount off the regular price, it's as much a gift to you as your intended recipient!

In this issue's Masterclass, we'll teach you to create a cute colour-free kiddie composite, while we have projects on shooting HDR images with monochrome in mind plus let you in on the secrets of focus stacking for the ultimate depth of field in macro images. We also continue our Teach Yourself Photoshop CC series in the magazine – with three bonus videos on the Video Disc.

PHOTOSHOP ELEMENTS/CS/CC

The latest versions of Photoshop Elements, CS and CC have significant differences from previous versions, with a redesigned interface and major changes to the way Adobe Camera Raw works. We are now producing most of our tutorials with these newer versions, and while it's possible to follow the lessons in older versions with a little adaptation, we recommend upgrading.

NEW VIDEO GUIDES!

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52 How to sharpen up your images quickly
in Photoshop CC



64 Improve images with controlled blur
in Photoshop CC



40 Edit JPEG images in Adobe Camera Raw
in Photoshop CC



52 How to sharpen up your images quickly
in Photoshop CC



64 Improve images with controlled blur
in Photoshop CC



40 Edit JPEG images in Adobe Camera Raw
in Photoshop CC



44 Create your own photo calendar
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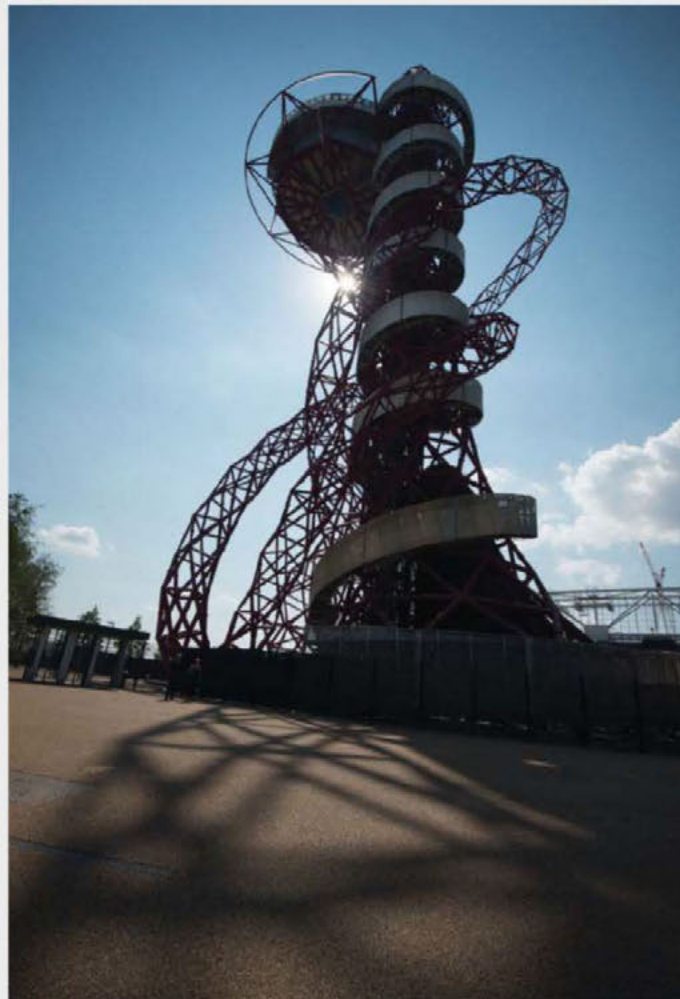
66 How to create stylish portrait compilations
in Photoshop Elements



48 Focus-stack macro shots for sharpness
in Photoshop CC



START IMAGES



James Paterson



Your guide
James Paterson

PROJECT



Create stunning mono HDR images

PhotoPlus Checklist

What you'll need

- Wide angle lens • Tripod
- Photoshop CC or CS

How long it'll take

Half a day

The skills you'll learn

- ✓ How to set up your camera for shooting HDR sequences
- ✓ How to use your Canon's Auto Exposure Bracketing feature
- ✓ How to combine your HDR images, then tweak it in ACR

Discover how to shoot and process high dynamic range images to pack some punch into your shots

Those photographers who dislike high dynamic range (HDR) imaging complain of gaudy colours, haloed edges and overcooked tones. But by using HDR for black-and-white photography, you don't need to worry about unnatural colours, so you can concentrate on processing your images to take advantage of the increased dynamic range. The ability to tease out detail, enhance texture and control the play of light and shade are all things that can lead to more punchy black-and-white images.

If you're new to HDR and wondering how it works, it's very easy. You simply take several frames of the same scene while varying the exposure to record extra detail in the highlights and shadows. It's particularly useful for high-contrast scenes like the iconic Orbit sculpture in London's Olympic Park, where we shot our example images. We'll show you how to shoot your own HDR sequence, then go on to process the images using Photoshop's Merge to HDR Pro command, before tone mapping in Camera Raw. ▶





PhotoPlus Super Tip!

Canon D-SLRs allow you to alter your exposures in increments of 1/3 of a stop. It's important to remember this when you're setting your exposure bracketing. An HDR image made up of three exposures that are only 1/3 of a stop under- and overexposed won't cover such a large dynamic range, with less impressive results.

PhotoPlus Phrase Book

Dynamic range

This simply describes the range of tones from the lightest and darkest points in a photograph. The dynamic range that can be recorded in a single shot by a Canon D-SLR is relatively small compared to the human eye. HDR photography is a technique used to expand the range of tones by combining several exposures together.

Bracketing

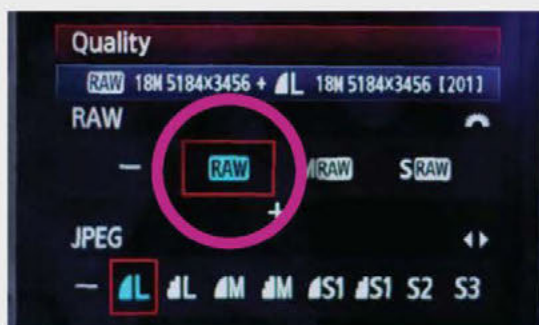
A system that increases the chances of getting the right exposure by allowing you to take a sequence of pictures, each with a slightly different exposure setting.

STEP BY STEP Five into one will go...



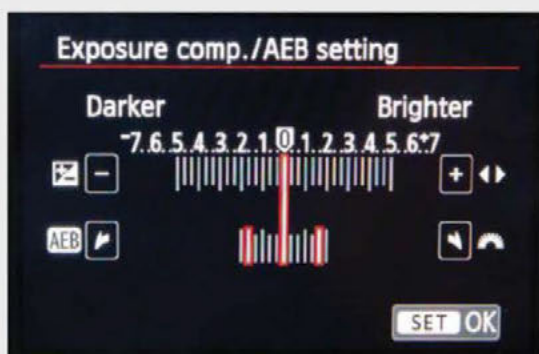
Use a tripod

1 HDR images require several aligned frames, so use a tripod. As well as helping to keep the camera position consistent between exposures, a tripod is also essential if a longer shutter speed is required, which is often the case when shooting the overexposed frames in your HDR sequence.



Shoot in Raw

2 The idea of a high dynamic image is to capture more light data than the camera is capable of in a single frame, so for best results shoot in Raw as the JPEG compression throws away a lot of image data. Set a low ISO of 50 or 100 to reduce noise, too, as it is really amplified by the HDR process.



Bracket the exposures

3 The easiest way to record a range of frames at different exposures is to set Auto Exposure Bracket (AEB) at -2 to +2. Your camera will take three shots in succession at three different exposures. If you want more, dial in -1 stop exposure compensation and fire off three bracketed frames, then overexpose by +2 stops and fire off a couple more to record five frames.



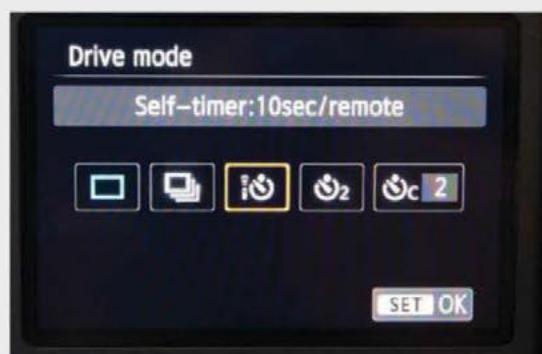
Aperture Priority mode

4 To capture under- and overexposed images, we could adjust either the aperture or shutter speed. However, you'll need to set Aperture Priority (Av) mode, as this will maintain the same depth of field throughout your sequence, while the camera will set the appropriate shutter speeds.



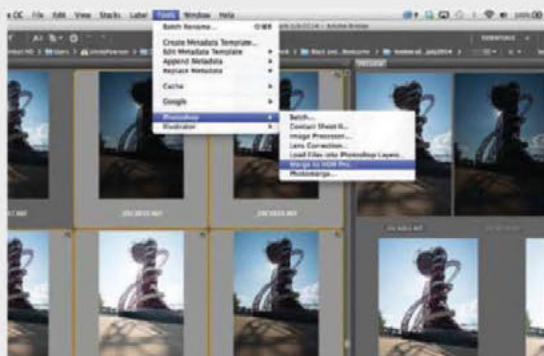
Mirror lockup

5 If your exposure requires a long shutter speed (anything below 1/100 sec) then set mirror lockup to avoid capturing signs of camera shake from the mirror movement. This is done through the Custom Functions Mirror Lockup Menu. Enable this, then set the timer to two seconds (or use a cable release).



Handheld HDR

6 If you don't have a tripod, it is possible to handhold your camera. Set up bracketing and use Continuous shooting drive mode, then brace yourself and hold the shutter button down to fire off the frames in quick succession. Increase the ISO to ensure the shutter speed doesn't drop below the handholding limit, which as a rule of thumb is 1/focal length.



Merge the images

7 Open all five starting images in ACR. Click Select All, then click the Lens Correction panel, go to the Color tab and check Remove Chromatic Aberration. Click Done to save changes. Select the five images in Bridge, then go to Tools > Photoshop > Merge to HDR Pro. They'll be combined into an HDR image. At the top-right of the interface, choose Mode: 32-Bit.



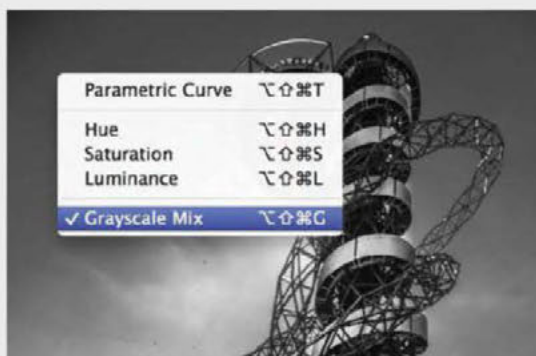
Remove the ghosts

8 There's a little movement in the clouds between the frames so check Remove Ghosts to fix this. Next check Complete Toning in Camera Raw, then click the Tone in ACR button (Photoshop CC only). For Photoshop CS, first save it as a 32-bit file, then right-click it in Bridge and choose Open in Camera Raw.



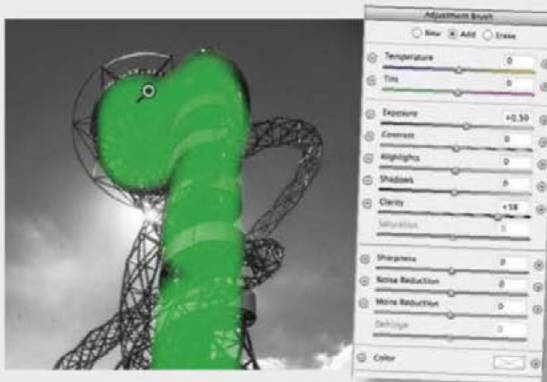
Increase the contrast

9 From here it's simply a case of using Camera Raw to process the image as you see fit. Head to the Basic panel first. Here we've set Exposure +0.85, Highlights -30, Shadows +29, Whites -27, Blacks +5, and Clarity +42. Next go to the Tone Curve Points tab and set two points to make a shallow S-shape, increasing the contrast.



Convert to monochrome

10 Grab the Targeted Adjustment tool then right-click and choose Grayscale Mix. Drag down over the sky to darken the blues and drag upwards to lighten the yellows and oranges in the foreground. Here we've got Oranges +40, Yellows +37, Aquas -11, Blues -82, Purples +77, and Magentas +69.



Make selective adjustments

11 Grab the Adjustment Brush, then click the Exposure + icon to set +5.0. Paint over the sculpture, using Y to toggle the mask view and [to resize the brush. Increase Clarity to +58. Click New and add another mask to lift the shadows over the couple at the bottom left. You can make any other selective adjustments you like at this stage.



Change the bit depth

12 Use the Spot Removal tool to remove any sensor marks and click OK. Note the Camera Raw filter is a Smart Filter, so you can double-click the layer to edit the settings. To save the image as a TIFF, first go to Image > Mode > 16-Bit. Click Merge, set Method: Exposure and Gamma, then click OK. ■



PhotoPlus Super Tip!

In Step 7 we open the images in ACR as they have been shot as Raw files, however, at this stage it's important not to make changes to the sliders in the Basic panel, which are largely aimed at eking the best exposure out of a shot; your images are *supposed* to be under- or overexposed until they are merged in the HDR process.

PhotoPlus Phrase Book

Mirror Lockup

This feature locks up the mirror a few seconds before the shutter fires, so that it's out of the way and the vibrations from its movement have subsided before the exposure starts. When you've enabled Mirror Lockup you need to press the shutter release twice – once to raise the mirror and again to take the shot – and touching the camera can also cause camera shake, so Mirror Lockup should be used in conjunction with a remote shutter release. If you use the 2-sec self-timer option instead you only need to press the shutter button once, to both flip up the mirror and take the shot.



Your guide
Hollie Latham

PROJECT

Create your own calendar

Have your best shots appreciated all year long by turning them into a personalised photo calendar

Many of us use calendars to remind us of important dates and events, to help keep our day-to-day lives organised. But despite being an ubiquitous Christmas stocking filler, they're not always the most inspiring gifts. So why not take the opportunity to design your own, using your favourite images shot over the past year? Not only are they a great way to showcase your work, they make a great gift for friends and family.

With the festive season upon us, now is the perfect time to sit down and sort through your photo archives and create a personalised calendar. If you're a last-minute shopper you'll be

pleased to hear how simple and quick it is, too! No laborious Photoshop work is involved; you simply upload your photos into a calendar-making website and – hey presto!

Okay, well there is, perhaps, a little more to it, but many online photo printing labs have eliminated the hard work by creating a range of templates with editable layouts and designs that you can access on their websites – so there's no need to download and install software. And this issue UK readers can take advantage of our excellent offer with CEWE Photoworld and save an astonishing 75% off the regular price of an A4 calendar – and just in time for Christmas, too!

STEP BY STEP Make it personal!

PhotoPlus Checklist

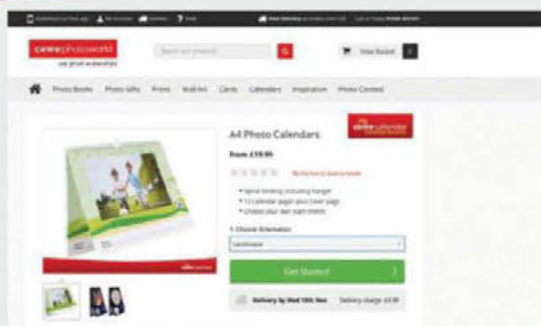
What you'll need

A dozen (or more) images •
Computer and internet connection

How long it'll take
1 hour

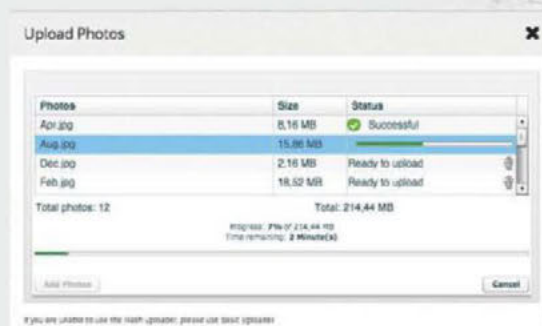
The skills you'll learn

- ✓ How to upload your images and import them into your calendar
- ✓ How to edit photos within the calendar template and add text
- ✓ How to save an incredible 75% off the regular price!



Getting started

1 Before you start to put your calendar together, it's best to have your dozen chosen images ready, so it's simply a case of placing them in the right order. Go to <https://photoworld.com/photo-calendars> and click A4 Photo Calendars. Choose Landscape or Portrait from the drop-down menu; the one you pick will depend on the orientation of your images. Click Get Started.



Uploading images

2 Navigate to the panel on the left-hand side of the screen, select My Photos and click Upload Images. Navigate to your folder of photos and hold down Ctrl (Cmd on a Mac) to select multiple images, hit Open and then click Start Upload. If you decide you want to change your calendar at any time, click Change Product at the top of the right-hand panel. ▶



2015

PhotoPlus Calendar



February 15

Sat 01

Sun 02 CW 6

Mon 03

Tue 04

Wed 05

Thu 06

Fri 07

Sat 08

Sun 09 CW 7

Mon 10

Tue 11

Wed 12

Thu 13

Fri 14

Sat 15

Sun 16 CW 8

Mon 17

Tue 18

Wed 19

Thu 20

Fri 21

Sat 22

Sun 23 CW 9

Mon 24

Tue 25

Wed 26

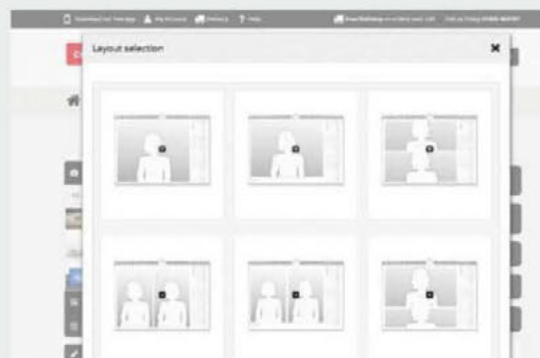
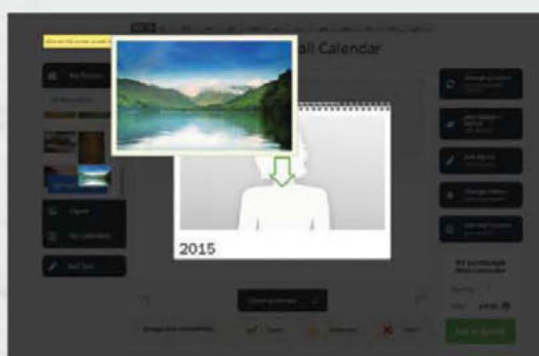
Thu 27

Fri 28



Choose a design

3 Before dragging-and-dropping your images in place, select the template you want for your calendar. Click on Add/Design Layout on the right-hand panel to choose from a range of standard layouts or the more novelty premium designs. At this stage it's best to edit the start month (and even year), if required; the default option starts at January 2015.



Change the layout

6 Click Edit Layout if you want to include more than one image; there are a range of layouts within each calendar theme to choose from, and these can be adjusted for each page individually. Click Change Colour to change the background colour scheme, which you can apply individually, or to all pages at once.



Exclusive offer – 75% off!
Get a calendar for just £5+p&p

CEWE Photoworld is one of the biggest printers of photo products in Europe, producing a huge range of items including photo prints, books, wall art and calendars. We have a cracking deal for you this issue – an A4 photo calendar for just £5, saving a massive 75% off the normal price of £19.99 (plus p&p). To take advantage of this offer, simply enter the code **PHOTOPLUS** at the checkout, but hurry, this offer expires on 31 January 2015 and is available to UK readers only.

Adding images

4 Select your title image from the My Photos thumbnails and you'll see a green arrow appear on the title page; click this to add the image. If you want to change the image, simply click on another shot and then add it in the same way. Hover over the image with your cursor to bring up two small icons in the top-left-hand corner; Edit Image and Delete Image.



Edit image

5 Click on the Edit Image icon to bring up a range of editing tools. Here you can fine-tune the position of your image by clicking-and-dragging it. You can also rotate, crop and add effects to your image and there's an additional option of having your image optimised in the lab (default is on). Once you're happy, click Done to confirm your changes and go back to the main page.

Add text

7 The front cover has a text box; hover over it to reveal Edit Text and Delete Text icons. Click the Edit Text icon and a toolbar appears with lots of editing options, such as font, colour and size. To add text, simply double-click inside the box and start typing. Click the Add Text panel to add further text boxes, and the Clipart panel to add graphics, if you wish.



Build the calendar

8 You can navigate between the pages of the calendar by clicking on the month tabs above the main window; a ticked box indicates that an image has been placed on that page. Click Open Preview for a larger view. Once you're happy with your calendar, click Add to Basket. This will give you another chance to preview your calendar before placing your order. ■

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Your guide
Claire Gillo



PROJECT

Focus stack for sharpness

Shoot multiple macro images then process them into a sharp shot with an extended depth of field

When shooting extreme close-ups with a macro lens, your depth of field becomes severely restricted, even at narrow apertures. The answer is to take a series of images from the same position, but each time shifting the focus ever-so-slightly, then combining the sharpest parts of each image in software to create one sharp shot with a super-extended depth of field that would be otherwise impossible.

Focus stacking is easier to perform with a focusing rail, which enables you to keep your lens focused at one point, but shifts the entire camera in tiny, regular steps. However you can get by without one, and in this

tutorial we're going to show you how to produce a focus stacked image using a tripod and a macro lens – we also used some extension tubes to exaggerate the magnification of our macro lens.

Finally, it's best to shoot a dead bug rather than one that is still alive and unlikely to keep stationary! It's also advisable to try this technique indoors so you don't have to compete with the weather. We've mounted our desiccated moth on a small tripod with a peg and, to create our background, we've simply popped a bag behind it. It helps to use bold, bright colours that contrast with your subject so that it'll stand out.

Claire Gillo



STEP BY STEP Capture creepy-crawly close-ups!

PhotoPlus Checklist

What you'll need

- Tripod • Dead bug or other small subject • Stand to mount subject onto • Small, colourful backdrop
- Remote shutter release
- LED ring light or flashgun
- Macro lens • Extension tubes (optional) • Photoshop CC or CS

How long it'll take
3 hours

The skills you'll learn

- ✓ How to get set up to capture close-ups of bugs
- ✓ How to shoot multiple images, shifting focus between shots
- ✓ How to focus stack your images in Photoshop



The setup

1 Mount your camera onto a tripod and set up your lighting; we used an LED ring light, to continuously light the subject evenly from all around, but you could use a regular flashgun. Attach a remote release so you can fire the shutter without nudging your camera. Get your bug in an elevated position (we pegged it to a mini-tripod) with an uncluttered backdrop behind it.



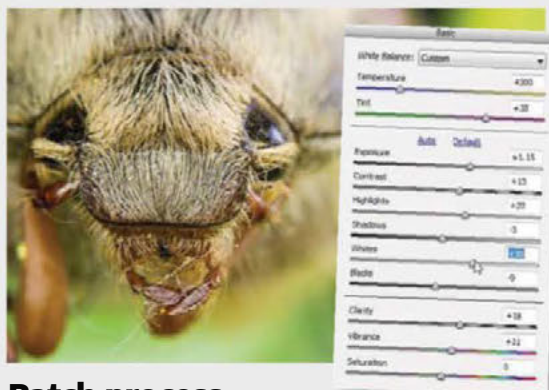
Aperture control

2 It's important that the depth of field is consistent for all your shots, so put your camera into Aperture Priority (Av) mode. Set an aperture of f/8 and ISO100 for optimum image quality; as the camera is supported on a tripod we don't need to worry about the resultant shutter speed. Select Raw image quality, to get the very best out of your exposures.



Move the focus

3 Switch your lens to Manual Focus and position the focusing ring at the closest possible focusing distance. Switch on Live View, and move the subject so that its closest point snaps into sharp focus, then take a shot. Twist the focusing ring a fraction, then take another shot. Repeat until the back part of your subject is in focus. You should have around 20 images in total.



Batch process

4 Open your images in Photoshop; as they're Raw files they'll open in ACR. Click Select All, so that all your adjustments will be applied to all your shots simultaneously. We started by warming the Temperature to 4300, and then set: Exposure +1.15; Contrast +13; Whites +30; Blacks -9; Shadows -3; Highlights +20; Clarity +18; Vibrance +11. ►



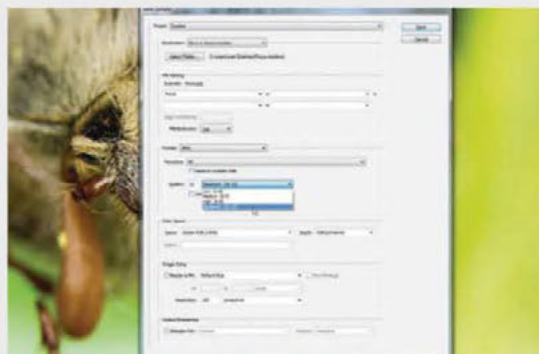
PhotoPlus Super Tip!

“ If you're in short supply of dead bugs then you can order them online! We ordered a range of dried moths from www.lba.uk.com. When purchasing, make sure you buy them unmounted as otherwise they are often glued down onto a presentation board or into a case, which won't work for this technique. ”

PhotoPlus Phrase Book

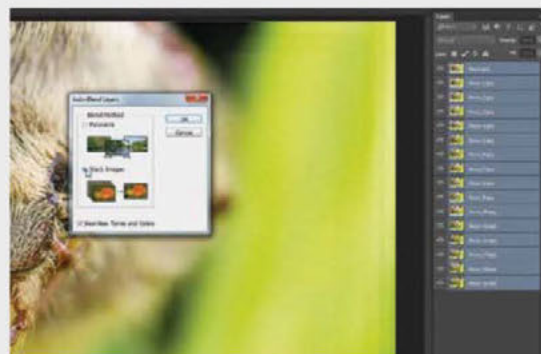
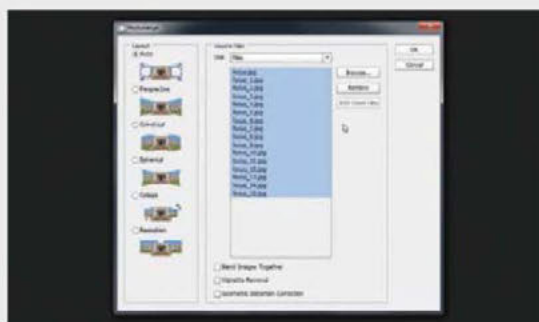
ACR adjustments

To make sure your images appears correctly exposed and accurate in tonal value you can alter the Exposure and Contrast sliders. If, after adjusting these settings, you're still not satisfied with the result you can go one step further using the Highlights, Shadows, Whites and Blacks sliders. The Whites and Blacks alter a much larger value range than the Highlights and Shadows. Enable the highlight clipping warning feature (the top-right arrow in the histogram) to check you're not losing detail in the highlights. Pixels with no detail will appear in red.



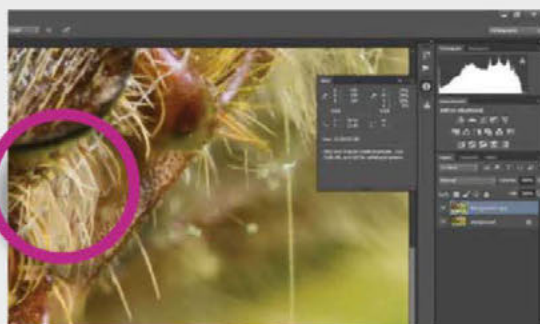
Save as JPEGs

5 Click Save Images and ensure Destination is set to Save in Same Location. Under File Naming, type 'focus' into the first box, select 2 Digit Serial Number for the second box, and then change the file extension to .jpg. Ensure the quality is set to Maximum and click Save. All the images will be batch-converted to JPEGs.



Auto Blend

7 Photoshop creates a document with each image on a separate layer. Highlight all the layers in the Layers palette (hold down Shift and click on each layer), then go to Edit > Auto Blend Layers. In the pop-up menu, select Stack Images, check the Seamless Tones and Colors option, and click OK.



Photomerge

6 Click Done to close ACR, then, from the main Photoshop editor, go to File > Automate > Photomerge. Select Browse and navigate to the start images. Highlight them all and click Open. Under Layout, select the Auto option, and make sure all three boxes at the bottom are unchecked. Click OK.

Final touches

8 Photoshop creates a stacked image from the sharpest parts of each layer. Go to Layer > Flatten Image. For the finishing touches, we cropped in, then duplicated the 'Background' layer and used the Clone Stamp tool to tidy up stray hairs and so on (Alt-click to select clone point then paint over any messy areas).



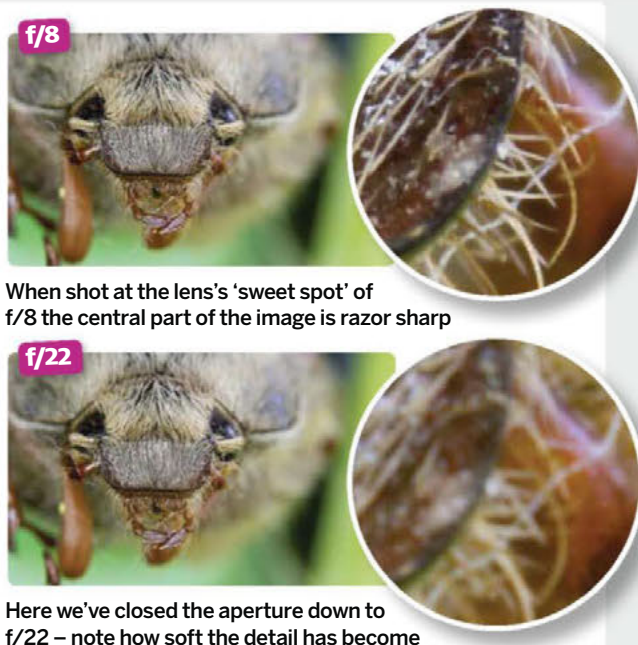
PhotoPlus Super Tip!

While you can use Photoshop to create focus-stacked images, if you're going to merge more than around 20 shots, it's best to use specialist software. Many macro photographers swear by Zerene Stacker (zerenesystems.com/cms/stacker), which can process focus-stacked images made up from dozens – or even hundreds – of separate photographs.

The danger of diffraction

Don't get caught with soft images by closing down the aperture too much

Narrower apertures give increased depth of field, so you may think that stopping down to a very narrow aperture (such as f/22), will give the sharpest image – but you'd be wrong. Due to a phenomenon called diffraction, the more you close the aperture after the 'sweet spot' of f/8 to f/11, the softer your image detail becomes. This is because light is 'diffracted' by the aperture blades before it strikes the sensor; the narrower the aperture, the greater the diffraction effect and the softer the image.



When shot at the lens's 'sweet spot' of f/8 the central part of the image is razor sharp

Here we've closed the aperture down to f/22 – note how soft the detail has become

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Sharpen up your images

Discover how to make your images appear crisp and sharp, even those blighted by camera-shake blur



It can be a challenge to get your images looking sharp. Many digital cameras have a built-in filter that blurs the image in an attempt to avoid producing moiré patterns. This low-pass (or anti-aliasing) filter can also soften important details and create a photo that lacks impact. What looks sharp on the camera's LCD screen may turn out to be soft. A slow shutter speed may also induce

blur, which is more difficult to fix. Fortunately, Photoshop has sharpening tools that are designed to tease out detail in a soft-looking shot. This post-production sharpening works by increasing the contrast around the edges of details in the image, giving them more impact.

However, when you sharpen an image using filters you risk exaggerating picture

noise in smooth areas, such as in a plain background. You can also introduce artefacts such as blown-out highlights. In the annotation below we point out the key techniques involved in using the Smart Sharpen filter to reveal fine details in a soft photo. On the right, we demonstrate how the Shake Reduction command can counteract motion blur caused by camera shake.

Overview: The Smart Sharpen filter

Give details more impact and keep sharpening artefacts at bay



AMOUNT

4 Increases the strength of the contrast adjustment around the edges of details. This contrast boost gives fine areas, such as eyelashes, more impact and makes them look sharper.

RADIUS

5 Increases the spread of the Amount contrast change. A larger Radius creates thicker lines that can turn into distracting haloes. As a rule, stick to a maximum Radius of 2.

REMOVE

6 The most effective option in this menu is Lens Blur. Motion Blur is designed to counteract camera-shake blur, but it's never been very effective.

SHADOWS

7 Toggle this option to limit the sharpening to the shadows or highlights. This enables you to target the areas that need sharpening.

GET SMART

1 You can sharpen an image in a non-destructive way by turning the image layer into a Smart Object. You can then toggle the filter on and off.

SMART SHARPEN

2 Photoshop has many sharpening tools. The most versatile can be summoned by choosing Filter > Sharpen > Smart Sharpen.

GIVE IT 100%

3 To assess how soft or sharp an image really is, you need to look at it at 100%. By default the Smart Sharpen preview window will zoom in to this value.

Photoshop Anatomy: Shake Reduction filter

Counteract the length and direction of shake-induced motion blur



BLUR TRACE MARQUEE

1 Click the pin at the centre of the default blur trace marquee and drag it to the area that needs to look sharp. The Shake Reduction filter will then analyse the selected area to determine the length and direction of motion-blurred pixels.

BLUR TRACE BOUNDS

2 After launching the filter, Photoshop attempts to work out how long and wide the steaks of motion blur are in pixels. If you spot haloes around contrasting edges, try reducing the amount.

SOURCE NOISE

3 If your photograph was captured using a high ISO, such as 800 or higher, then you can set this drop-down menu to High to stop noise artefacts from being exaggerated by the shake-reduction process.

ARTEFACT SUPPRESSION

4 The shake-reduction process can add ugly artefacts such as noise, haloes and repeating edges (ghosting), especially if multiple blur trace bounds are used. This slider will help to reduce those artefacts.

SMOOTHING

5 This slider enables you to get a balance between smoothing out sharpening-induced noise in clear areas such as skin, while preserving details in contrasting edges.

ADVANCED OPTIONS

6 Our two Blur Trace marquees help Photoshop understand motion blur in different sections of the image. Each white blur trace icon shows the length and direction of a particular Blur Trace marquee's blur. ■



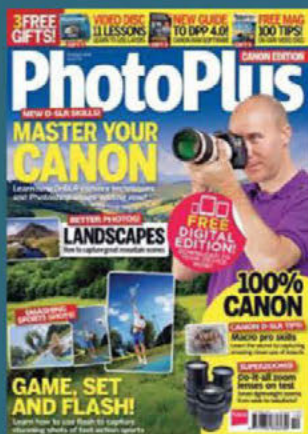
PhotoPlus Super Tip!

For the best results, use well-lit images with the camera shake reduction filter as the noise levels will be low. Images captured with a long focal length or a slow shutter speed are particularly suitable for this kind of shake reduction. You can sharpen blurred text in images affected by camera motion, too.

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THE ULTIMATE CHRISTMAS GIFT GUIDE

From stocking fillers to great budget lenses – treat your true love (your D-SLR!) over the festive season



JUST FOR STARTERS

To put at the top of your Christmas wish-list

NISSIN i40

Web: www.kenro.co.uk

Price: £204

Fed up with fat flashguns? The i40 manages to pack some serious punch with its GN40 power rating and fast recycle times, yet it's around half the size of an average flashgun and tips the scales at a featherweight 304g. A perfect partner for an EOS M or a 100D.



EVOC CP26L

Web: www.evocsports.com

Price: £220

Designed for life off the beaten track, this quality backpack will swallow an EOS-1D X and up to five lenses in sumptuous style, while superb back and strap padding also keep you comfortable. Rear and side openings ensure fast access, plus there's space up top to use as a day pack.



LACIE RUGGED

Web: www.lacie.com **Price:** £150

This all-terrain storage will keep your photos safe in environments that'd send lesser rivals to hard drive hell. It's dust and splash proof, as well as hard enough to shrug off a two-metre drop and a ton of pressure. Thunderbolt and USB 3.0 connectivity also make the Rugged a fast fortress.



LEE FILTERS LITTLE STOPPER

Web: www.leefilters.com **Price:** £99

Lee Filters' Big Stopper was a revelation for creating silky-smooth, long-exposure seascapes by reducing light by ten stops. For more manageable shutter speeds in lower light, the Little Stopper's six-stop reduction is ideal.



ASPIRE PHOTOGRAPHY TRAINING

Web: www.aspirephotographytraining.co.uk **Price:** From £free

There's nothing like unwrapping new Canon kit, but knowing how to get the most out of it is a must. Aspire's range of courses offer inspiration, knowledge and practical experience that'll take your photography to the next level.



ADOBE CREATIVE CLOUD PHOTOGRAPHY SUBSCRIPTION

Web: www.adobe.com **Price:** £89

It's no secret that Photoshop CC is still the daddy of image-editing software, and now you can get it with Lightroom included for a bargain annual subscription. Not convinced? Check out the super-smart Advanced Healing Brush, new Perspective Warp tool and enhancements in Camera Raw 8.



CHRISTMAS LIGHTS

A selection of illuminating photography gifts

WESTCOTT ICE LIGHT

Web: www.theicelight.com Price: £399

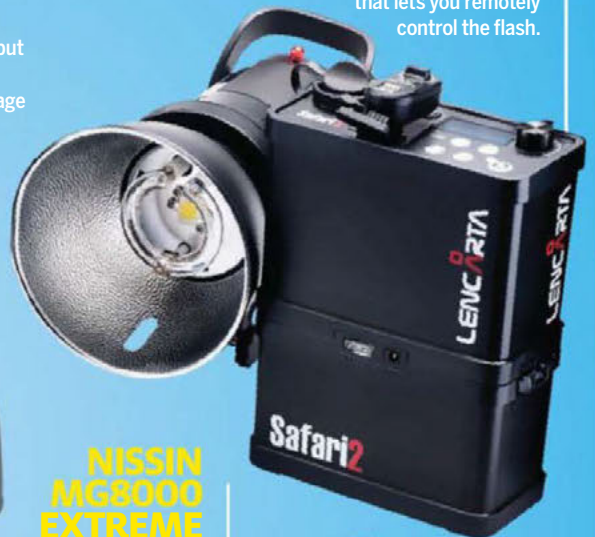
Ideal for stills and video, this portable continuous light source features variable brightness LEDs that give beautifully soft illumination. A 150W-equivalent max power output is great at close range and you can also attach coloured gels to really engage in some *Star Wars* lightsabre antics!



LENCARTA SAFARI 2 600Ws PORTABLE FLASH SYSTEM

Web: www.lencarta.com
Price: £700

This second-generation Safari maintains the original's 600Ws power output, rapid recycle times and impressive 400 full-power flashes from its rechargeable battery. But Lencarta now includes its excellent Wavesync Commander remote triggering system that lets you remotely control the flash.



NISSIN MG8000 EXTREME

Web: <http://kenro.co.uk>
Price: £465

Where the i40 is a mini marvel, the MG8000 Extreme is Nissin's ultimate fire-power. Not only do you get a dazzling GN60 power rating, but thanks to a clever new quartz flash tube design, the cool-running MG8000 will blast 1,000 consecutive full-power flashes without breaking a sweat.



ROTOLIGHT SOUND AND LIGHT KIT

Web: www.rotolight.com
Price: £190

If your Canon's built-in microphone just isn't cutting it and you fancy more lighting control too, put this compact combo on your Christmas list. The battery-powered unidirectional mic captures stellar sound quality for up to 100 hours, while the dinky LED ring is big on light softness.



RIFT LABS KICK

Web: <http://shop.colourconfidence.com> Price: £135

The tiny light is a similar size and weight to a smartphone, yet 40 LEDs kick out plenty of power to light stills and video. But that's not all, as Wi-Fi connectivity and a companion smartphone app let you remotely control brightness, colour and even create light shows.



ILUX SUMMIT

Web: <http://shop.photomart.co.uk>
Price: £500

Portable studio flash heads are great for shooting outdoor portraiture, but usually require a separate bulky battery. Not so with the Summit, as its compact Li-ion power pack is part of the 600Ws head itself. Dial down to half power and you'll get around 1,000 flashes per charge.





OUT ON THE SHOOT

Don't leave the house without this little lot

PÁRAMO ARWP ASPIRA SMOCK

Web: www.paramo.co.uk
Price: £315

A photography jacket recommended by world-renowned wildlife photographer Andy Rouse should be something special, and it doesn't disappoint. Foam inserts help lighten heavy loads and extra forearm reinforcement is great when you need to lie low. Plus, it'll also protect you, rain or shine.



MANFROTTO PRO LIGHT BUMBLEBEE-220 PL

Web: www.manfrotto.co.uk
Price: £250

When you've got to shift serious kit, this pack's got your back. You can squeeze in your Canon with an attached lens, plus a second body and up to eight extra lenses. There's space for a 17in laptop too, and everything's suspended from rubberised straps and a hip belt.

MANFROTTO BEFREE CARBON

Web: www.manfrotto.co.uk **Price:** £280

Designed to give great camera support without weighing you down, the Befree shrinks to a diminutive 40cm, yet at full stretch will reach a respectable 142cm. Carbon construction means it tips the scales at just 1.1kg, yet it doesn't sacrifice quality components or excellent ergonomics.



JILL-E CAMERA BAGS

Web: www.jill-e.com
Price: From £20

Camera bags: you don't have to look far for something functional, but style can be much more elusive. Jill-e bags give you the best of both worlds, with well-padded customisable interiors clad in super-stylish, exquisite exteriors. There's something large or small to suit him or her.



CACTUS RF60 FLASH & TRANSCIVER V6

Web: www.cactus-image.com **Price:** £170

Here's a flashgun that's not only bright; it's smart. Inside is a wireless receiver that lets you use it off-camera without attaching a separate receiver unit. Team it with the Cactus V6 Transceiver and you'll be able to remotely control a group of different-brand flashguns simultaneously.

XSORIES WEYE FEYE

Web: www.weye-feye.com
Price: £200

This little box of tricks emits a powerful Wi-Fi signal which, when combined with a companion app, lets you take remote control of your Canon with a smartphone or tablet. The system boasts an 80-metre range, but stay close and an impressive 0.2-second response time banishes lag.



ESSENTIAL ACCESSORIES

The stuff you didn't realise that you needed



TRIGGERTRAP MOBILE

Web: <http://triggertrap.com> **Price:** £23

Using your smartphone to control your Canon is nothing new, but Triggertrap's diminutive dongle and app takes things to the next level. Play about with fun triggering modes, innovative timelapse features or long exposures. Most Canon D-SLRs are supported and the app runs on iOS or Android.



LEE FILTERS LANDSCAPE POLARISER

Web: www.leefilters.com **Price:** £174

Polarising filters are just the ticket for minimising glare and increasing contrast in your landscape shots. Lee's Landscape Polariser has the added advantage of being slim enough to use with 16mm wide-angle lenses without vignetting, while its subtle warming bias enhances landscape tones.



G-DRIVE MOBILE WITH THUNDERBOLT

Web: www.g-technology.eu **Price:** £124

This stylish portable storage for laptop users features ultra-fast Thunderbolt and USB 3.0 interfaces. G-Technology combines 1TB capacity and a 7200rpm hard drive, together for quick backup of your digital photos, videos and more. It's also bus-powered, and that means when you're on-the-go, you don't need to add an external AC power supply to your laptop case.



WHITEWALL GIFT CERTIFICATES

Web: <https://uk.whitewall.com/service/give-coupon> **Price:** From £25

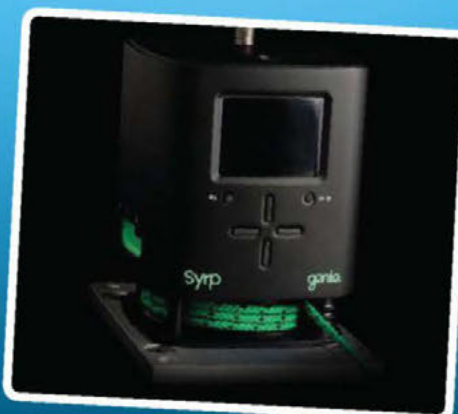
Some gift vouchers may be a Christmassy cop-out, but one of these should go down a treat. WhiteWall's award-winning printing facilities turn prized photos into stunning wall art up to 1.8 x 1.2 metres. Choose from numerous quality papers, acrylic, canvas and many more premium mediums.



LASTOLITE URBAN BACKGROUNDS

Web: www.lastolite.co.uk **Price:** £170

Banish bland backdrops and spice up your portraiture with one of these funky collapsible backgrounds. There's a different style on each side, whether it be a wall and fence, shutter and a door, or tarnished metal and a container. An unfolded 2.1m height is great for taller models.



SYRP GENIE

Web: <http://syrp.co.nz> **Price:** £798

Stunning timelapse sequences of star trails and bustling cities are certainly attention-grabbing, but the Genie will leave you spellbound as it'll also move your Canon between shots to capture motion-controlled timelapses. All this from a cube that'll easily stash inside most kit bags.



GETTING SERIOUS

Get Santa's little helpers working overtime

PROFOTO REFLECTOR BLACK/WHITE

Web: <http://profoto.com>
Price: From £70

Profoto makes some of the best lighting gear in the business, but if you can't stretch to a top-end studio flash, one of these handy reflectors is a good start. Black and white sides reflect or absorb light, while ergonomic handles make even the large 120cm version easy to hold.



SYRP VARIABLE ND FILTER

Web: <http://syryp.co.nz>
Price: From £86

Proof that less can be more; this variable ND gives you 1-8.5 stops of light reduction from a single filter.

It's just what you need for capturing daytime timelapses or smoothing a waterfall. Choose from 67mm or 82mm versions, each with a pair of stepping rings to cover other thread sizes.



FORMATT-HITECH 100mm PREMIER LANDSCAPE FILTER KIT

Web: [www.formatt-hitech.com](http://formatt-hitech.com)
Price: £399

Shoot wintry landscapes with the help of this no-compromise filter kit. An ND4 soft grad keeps bright skies in check, the reverse grad blocks light across the horizon, while the ProStop IRND 6 is ideal for long exposures.



DELKIN SENSORSCOPE SENSOR CLEANING SYSTEM

Web: <http://delkin.com> **Price:** £80

Spots on your sensor don't stand a chance against Delkin's arsenal of grime-fighting gizmos. Swabs and solution eliminate stubborn muck, or there's the SensorPen for a quick clean. A mini vac sucks dust away, and you can see every spec through the magnifying and illuminating SensorScope.



UNIQBALL BALL HEAD

Web: [www.uniqball.eu](http://uniqball.eu)
Price: From £264

If you thought all ball heads were alike, think again. The Uniq lives up to its name by having a dual ball design that gives you the stability of a gimbal design, levelling characteristics of a pan head and ball head compactness. Two size options cater for medium or large lenses.



SIRUI N-3203X CARBON FIBRE TRIPOD

Web: [www.sirui.eu](http://sirui.eu)
Price: £280

Get some serious support for your Canon with this pro-quality set of legs. Eight-layer carbon construction keeps weight down to 1.8kg and stays solid under 20kg of kit. Then for some added versatility, one leg can be unscrewed and paired with the centre column to create a towering monopod.



JUST FOR FUN

A selection of stocking fillers



CAMERA LENS CUP

Web: www.iwantoneofthose.com

Price: £9

Just when you thought you had a Canon lens for every occasion, here's something a little different. Sure, its sharpness and distortion levels need work, but it makes up for this with top-notch waterproofing, shock resistance and lightness. No other lens quenches your thirst better.



COOPH T-SHIRTS

Web: <http://store.cooph.com>
Price: £39

Photography-themed T-shirts can be dangerously clichéd, but Cooph designs scream style and are ideal apparel for looking sharp on a street shoot. You can get male and female fits and all are soft 100% cotton, complete with a discrete pocket that's the perfect place to store your lens cap.

SAY CHEESE INSTANT SLICER

Web: www.firebox.com
Price: £10

Fondue yourself a favour and slice your favourite fromage with this cheesy yet tasty trinket. It may be one Polaroid that'll develop more palettes than pictures, but it'll grate almost as much as these puns. Plus, if you ever get feta up of it, it'll stilton be worth something on brieBay.



CAMERA LENS SHOT GLASSES

Web: www.firebox.com
Price: £15

Why snap shots when you can drink them? This trio of tiddly stocking fillers will make the Christmas sherry much more interesting, and they even look the part thanks to their cute homage to Canon kit. However, unlike the real thing, too much use has been known to reduce focus accuracy.



LOCKCIRCLE EF CAMERA BODY CAP

Web: www.lockcircle.com Price: £81

For the photographer who's got it all: a precision-machined aluminium body cap. Silver, titanium and black versions all lock in place with more precision than Santa's sat nav and seal like his belly in your chimney. He'll want plenty of mince pies though, as this is one pricey pressie.



LENS KITCHEN TIMER

Web: <http://photojojo.com> Price: £9

Well ding-a-ling, it's a kitchen timer that looks like a lens. When you'd rather be with your Canon than your cooker, this wind-up wonder will be a welcome distraction. It's pretty convincing too, but that f/60 aperture suggests something's up. Maybe it's just got incredible depth of field?



PHOTOPHREEZEPHUN

Web: <http://bigfanofphoto.com>
Price: £10

Okay, ice cubes on Christmas morning probably aren't top of your wish list, but ice cubes in the shape of cameras, lenses and flashguns? Forget the mulled wine: it's time for a cool G&T! Or, if you'd rather something sweeter and warmer, why not try moulding chocolate camera kit?





BUDGET LENS BUYS

And a budget Canon EOS D-SLR body too, for luck...

SIGMA 18-250mm f/3.5-6.3 DC MACRO OS HSM

Web: www.sigma-imaging-uk.com
Price: £295

Stretching from a wide-angle 18mm view to an impressive 250mm telephoto reach, you may never need to fit another lens to your camera, and this Sigma is the best-value superzoom around.



SAMYANG 8mm f/3.5 UMC CS II DIAGONAL FISHEYE

Web: www.samyang.co.uk
Price: £265

Fisheyes offer a distorted view that can lend your shots a unique look. Some might be put off by this Samyang being a purely manual lens, but don't be; with such a wide angle of view, pretty much everything will be in focus anyway.



CANON EF 40mm f/2.8 STM

Web: www.canon.co.uk
Price: £159

This fixed-focal-length pancake lens is the perfect match for smaller D-SLRs, adding less than an inch to the camera's profile. It features silky-smooth and near-silent STM focusing, super-sharp optics, a natural angle-of-view and is pretty fast at f/2.8, making it a fabulous low-light shooter.



SIGMA APO 70-300mm f/4-5.6 DG MACRO

Web: www.sigma-imaging-uk.com
Price: £149

If you want maximum telephoto zoom for minimum cash outlay, this is the lens for you. Yes, there are cheaper 70-300mm zooms out there, but this Sigma offers the best compromise between decent image quality and value, coming in at under 150 notes.

100D BODY

Web: www.canon.co.uk Price: £375

If you're looking for your first Canon D-SLR or need a budget backup body that takes the minimum space in your bag, then look no further. It's diminutive dimensions belie its enviable feature list, including an 18Mp sensor, fast Digic 5 processor and 1,040K dot LCD.



TAMRON SP 150-600mm f/5-6.3 DI VC USD

Web: www.tamron.eu/uk Price: £949

This is something of a monster of a lens, giving a stupendous 600mm telephoto view when zoomed right in. It boasts all manner of high-end features too, including weather seals, image stabilisation and ultrasonic focusing, making it a great all-rounder for outdoor sports and wildlife photography. ■





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& 18-55MM IS STM LENS

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www.LCEgroup.co.uk/wonderland



Your guide
George Cairns



Improve images with controlled blur

Discover how to improve your photographs by adding creative and selective blur effects using the Blur Gallery

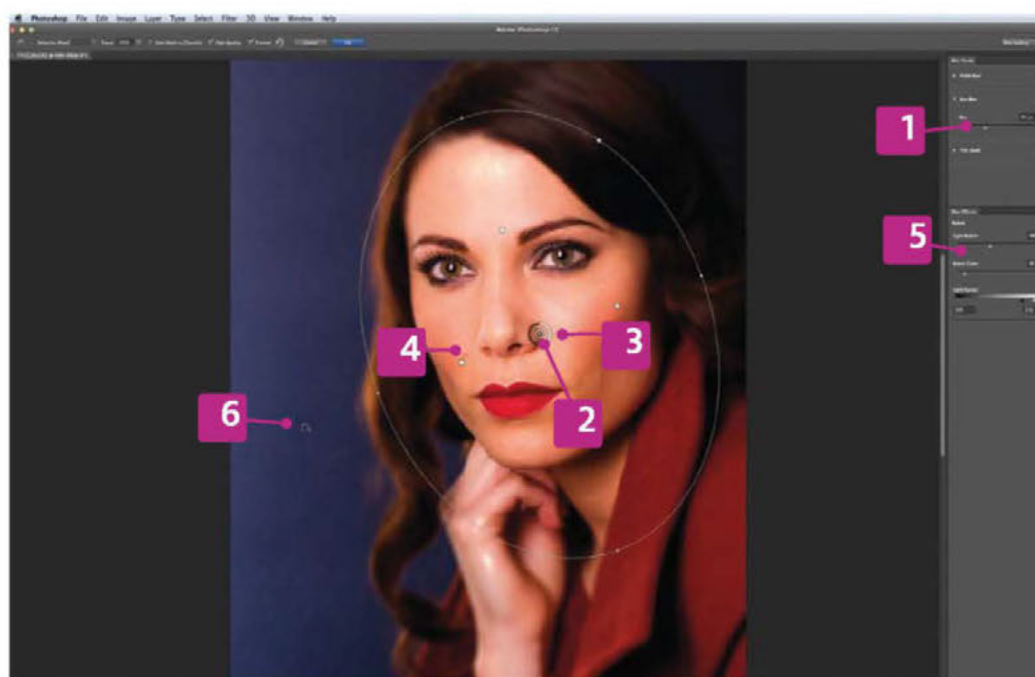
When you capture an image on a digital SLR you can add in-camera blur effects to enhance your images. By using a wide aperture setting, such as f/2 for instance, you create a shallow depth of field. This makes the focal point, such as the face in a portrait, look nice and sharp, while blurring out the distracting background elements.

If you have a tilt-shift lens you can take even more control over where blur appears in your images. This specialist lens enables you to create a narrow band of focus sandwiched between two blurred sections. This narrow band of focus mimics the effect you get when shooting a small subject from close up, which makes life-size scenes look like scale models.

Producing good selective-focus or tilt-shift effects in camera can be tricky, so we'll show you how to create these effects using the Blur Gallery. This gives you more control over the strength and location of blur in an image, helping avoid the hit-and-miss approach of capturing blur in camera. The Blur Gallery's Field Blur filter adds a natural-looking lens blur to the entire image.

Overview: Create a background blur

Use the Blur Gallery's Iris Blur filter to reduce the impact of background distractions



FALL OFF

4 You can feather the area between the sharp and blurred pixels by dragging any one of these four control points. This enables you to control how gradual or steep the blend is between the focused and blurred pixels.

LIGHT BOKEH

5 Lens-produced bokeh may feature artefacts such as clipped (or blooming) highlights. Recreate these effects by dragging this slider right. The Light Range slider enables you to shrink or enlarge the range of tones that feature blown-out highlights, such as those on the hand in this image.

IRIS BLUR

1 Go to the Filter menu and choose Blur. The top section of the Blur menu features the Blur Gallery – Field Blur, Iris Blur and Tilt-Shift. Choose Iris Blur.

POSITION PIN

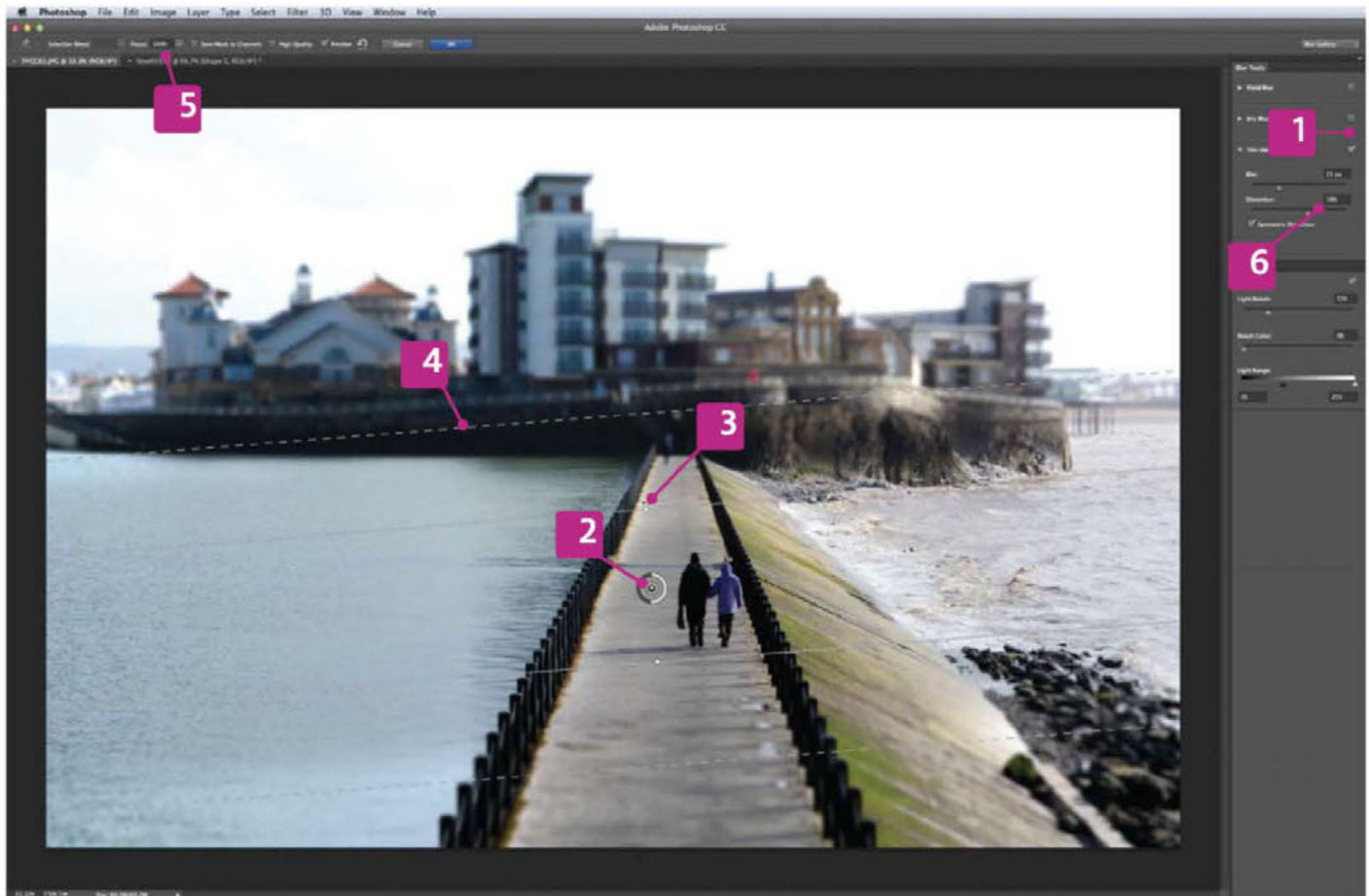
2 A control pin will be placed at the centre of the image. Drag the pin to position it over the area that you want to keep sharp.

BLUR AMOUNT

3 You can increase or decrease the amount of blur by dragging this dial. Areas outside the ellipse will become softer or sharper.

MORE PINS

6 Click to place additional Iris Blur pins. This enables you to take more control over the strength and location of the bokeh in any part of the image.



Photoshop Anatomy: Tilt-Shift blur filter

Give ordinary snapshots the look of photos of scale models

TILT-SHIFT

1 If you're already working in the Blur Gallery, click here to activate the Tilt-Shift option, and then toggle it open to access the editable properties. Or choose Filter > Blur > Tilt-Shift from the main menu bar.

POSITION PIN

2 As with the Iris Blur, you can drag a pin to fine-tune the position of the sharp and blurred pixels in your filtered image. You can also drag the pin's dial to increase or decrease the Blur amount.

ROTATE

3 You can rotate a real tilt-shift lens to create a diagonal line of focus that suits your subject matter's composition. Recreate this effect by dragging the rotate icon that appears when you rest the cursor near a control point.

BLUR BORDER

4 Drag this dotted line to create a narrower or wider transition between the blurred and focused parts of the image. You can adjust the top and bottom transition lines independently.

FOCUS

5 The centre of any blur filter's ellipse in the Blur Gallery is 100% in focus. You can make the blur effect seep into the sharper areas of the image by reducing the value of this slider.

DISTORTION

6 By dragging this slider to the right you can add lens-related distortion to the blurred foreground area at the bottom of the frame. To distort the top section in the same way, tick the Symmetric Distortion box. ■

SPECIAL OFFER!

Learn more Photoshop!

This tutorial and the accompanying videos have been taken from our full 50-part course, *Teach Yourself Photoshop*. We're running the full video series in *PhotoPlus* over ten issues, but there are several ways you can get the full course right now...

- You can buy the digital book edition via the Specials and All Products tab of the *PhotoPlus* iPad app (<http://goo.gl/FUVam>) for £6.99.
- You can buy the full 50-part video edition, which is available now as either a DVD or an iPad app. If you want to buy the full DVD, take advantage of our special offer and get it for just £11.99 (the full price is £19.99) by using the code **MFMDVD** at our secure online store* via <http://bit.ly/typsdvd>.

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Toddlers and babies are photographed by parents, relatives and family friends with a frequency usually reserved for A-list celebrities. But if you want your child photos to look more refined than the average smartphone snap, a little more care and attention is required. So we'll show you how to transform your living room into a makeshift studio, then present your images in an eye-catching compilation.

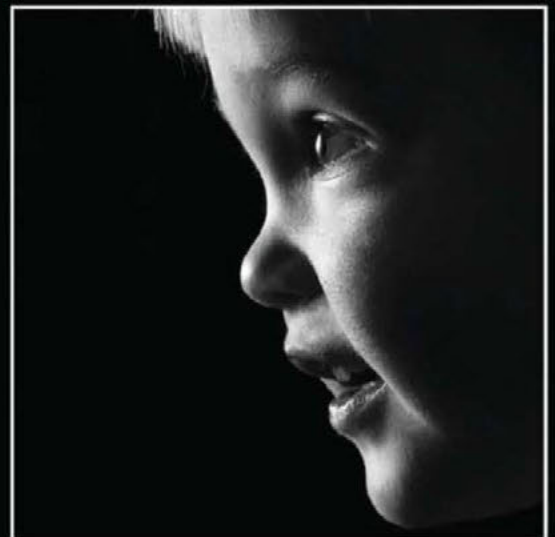
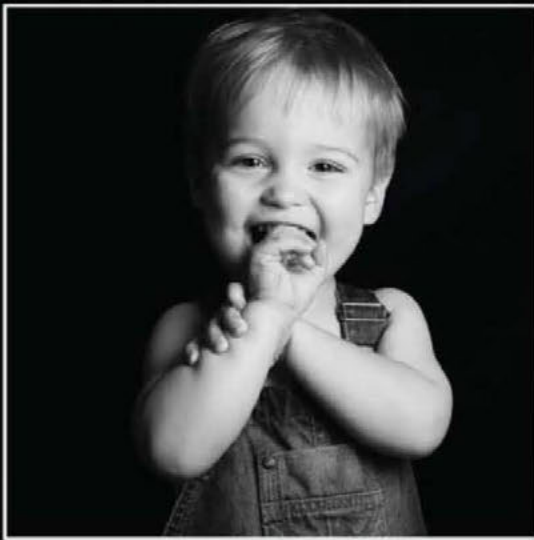
Successful compilations are all about balance. For colour images, it's a case of pairing colours that don't clash, whereas in black and white a balance of light and dark is important.

For example, if a couple of images are dominated by dark tones, placing them opposite one another will balance the overall look. The same

balance works for composition. If, for example, a person is looking to the side, then it's best to have them looking inwards, and, ideally, you'd use a shot taken from the other side to sit opposite. For a grid of images like this, compositional triangles can work well. Notice how there's a triangle of darker-toned images (bottom-left, top-middle, bottom-right), and one of lighter images (top-left, bottom-middle, top-right).

We'll show you how to make a compilation in Photoshop Elements with simple layer skills and clipping masks to crop the images. It's a smart way to work, as we're free to tweak the crop of each frame at any time, which is handy when we want to try out different image combinations and fine-tune the overall balance. ▶





STEP BY STEP

Transform your living room into a portrait studio

All you need for great portraits is a Speedlite, white umbrella and simple background

Dark background

1 Blankets and sheets are very useful for portrait shoots. You can either get the child to lie on them, or instead prop them up for a clean, simple background. Textured material can work well – children like the feel of them on their skin, and textures become more important when converting to mono.



White umbrella

2 The larger a light source the softer it becomes. Flashguns have a small source, so the light is hard and unflattering. A white umbrella transforms the harsh, unflattering light into a bank of beautiful soft, diffused illumination. Attach your flash to a tripod using the thread in its stand, then rig the umbrella in front of it.





Wireless triggering

3 Canons with wireless flash and compatible flashguns make wireless triggering a breeze. Simply open your pop-up flash then go to Menu > Flash Control > Built-In Flash Func. Set Flash Mode to Manual Flash and choose an output power, then set your flashgun to Wireless. Now the pop-up flash can not only trigger the Speedlite wirelessly, but also communicate the power you want through a series of pre-flash bursts.

Cameras settings

4 When using flash the high light levels mean that you should always set your ISO to 100 for the best quality. You'll need to be in Manual mode with your shutter speed set to about 1/200 sec. Try setting aperture to f/11 and take a test shot. If it's too dark, open the aperture or increase the flash power, and if it's too bright, do the opposite.



Shoot opposites

5 Symmetry works well in compilations, so plan ahead during the shoot. If, for example, you take a shot of the child looking to one side, make sure you get another where they're looking the other way. When the two shots are presented together, they'll create a pleasing symmetry to the compilation. For side-lit shots like this, position the flash to the side and slightly behind the face.



Wide aperture

6 The great thing about using flash is that it allows you to control depth of field. A high flash power combined with a narrow aperture gives you more depth of field – perfect for full body or headshots, while a low flash power and a wide aperture gives a shallow depth of field, ideal for isolating details like the lashes here. ▶

PhotoPlus Phrase Book

Clipping mask

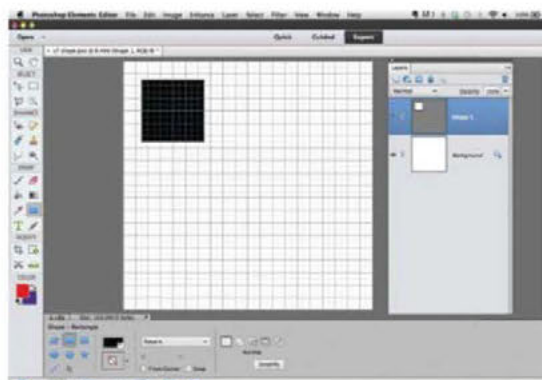
Clipping masks work by confining a layer to the shape of the layer below. Create a clipping mask by holding Alt and clicking the line between two layers (the top layer will become slightly indented). The only parts of the top layer that will remain visible are those that sit directly above the shape of the lower layer. It's a useful feature for adding images over text, or confining an image to a box as we've done.

STEP BY STEP Make a portrait compilation



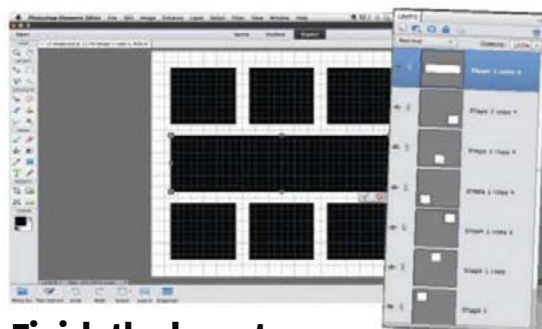
Work out the size you need

1 Begin by working out a size for the compilation. We want a 3x3 grid of five-inch squares (with the middle row as a single panoramic), one inch borders in between each image and a 1.5-inch border around the edges. This gives an overall size of 20x20 inches. Open Elements and go to File > New > Blank Document. Set Width and Height to 20 inches and click OK.



Add a square

2 Go to Edit > Preferences, select Guides and Grid, then set Gridline every 1 inch with 2 subdivisions. Next grab the Custom Shape tool from the Tools panel and choose the Square shape in the tool options. Hit D to set the foreground colour to black, then drag out a 5x5-inch square in the top corner of the document.



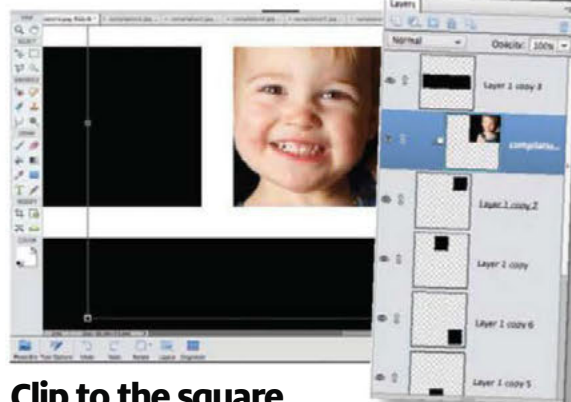
Finish the layout

3 Grab the Move tool from the Tools panel and check Auto Select Layer and Show Bounding Box. Alt-drag the square to make a copy. Position it to the side with one inch in between, then continue Alt-dragging to make more squares. For the panoramic frame, drag the bounding box to make it rectangular.



Add an image

4 Hide the grid with View > Grid so that you have a clearer view of the document. Grab the Move tool from the Tools panel. Open all the images you intend to use in Elements. Go to the Photo Bin and choose Show Open Files, then double-click the layout. Click the first square you want to fill with an image, then drag an image into the document window from the Photo Bin.



Clip to the square

5 Go to the Layers panel. Alt-click the line between the newly added image and the square layer below. This clips the image to the square, which means that we can move the image around within the frame to get the crop we want, effectively turning it into a window for the underlying image. Click the bounding box to resize and rotate the layer until you're happy.



Convert to monochrome

6 Highlight the top layer and click the Create Adjustment Layer icon in the Layers panel. Choose Gradient Map. Set Gradient: Default. Press D, then X to reset the swatch colours to the default black and white. Choose the top-left Foreground to Background preset.



PhotoPlus Super Tip!

The Alt key is a useful shortcut for copying items in Photoshop. Hold Alt and drag any layer, layer style, shape or layer mask in the Layers panel to quickly make a copy of it. Similarly, when using the Move tool to move layers around a document, hold Alt to make a copy at the same time – ideal for copying the square boxes in the compilation.



Fill the remaining boxes

7 Add more images, clipping them to each square. To move them once they are in the document, simply drag them with the Move tool. To add a border around each image, Ctrl-click one of the square layers, then Shift-Ctrl-click the others to load a selection. Make a new layer at the top of the stack, then go to Edit > Stroke (Outline) Selection. Set colour black and 8px.

Invert the background

8 If you want to prepare each image for printing separately, Ctrl-click the relevant image square, then go to Image > Crop. Save the file separately, then undo (using Ctrl+Z) and repeat for the others. Alternatively, to present them together with a black background: highlight the 'Background' layer and hit Ctrl+I, then repeat on the top outline layer.



PhotoPlus Super Tip!

“Portraits taken at eye level create a connection between viewer and subject, so when taking photos of children, it's important to get down to their level. It might mean you need to get down and crawl around on the floor, but it results in much better portraits than if every shot is taken from above, from an adult viewpoint.”

Newborn Babies

Newborn babies are also ideal subjects for a compilation. Of course, they aren't able to pull many poses, and their array of expressions could be quite limited (especially if they're asleep!) so to add variety to the compilation, shoot details like little fingers, toes, and lashes. Not every image needs to include the face! If parents don't want to be in the picture, you could still make use of their hands and arms to hold the baby and give a sense of scale to the tiny body.

Babies might be a little wary of flash, so you could try using window light instead. The images here were all taken with the light from a large bay window. As window light is less strong than flash you'll need a higher ISO, but the images in a compilation are usually quite small, so you don't need to worry too much about noise. ■



Workshop

Welcome to the Canon D-SLR photography service centre

PROBLEM #39

What's the trick to long exposures?

Improve your slow-shutter-speed scenic shots and capture pictures worth waiting for...

What's the big deal with long exposures? Isn't it all standing around for hours at a time, watching the camera battery empty faster than Hamleys on Christmas Eve – only to find that you've cocked up the exposure and have to repeat the process all over again? Well, yes. In many cases it is. But a long exposure can produce a more interesting photo than a standard exposure, recording something that the eye can't normally see and giving

pictures a painterly, impressionistic look. Reality can be dull, and using a slow shutter speed to render movement as a blur adds an unpredictable quality to photography.

The trick is to keep the camera perfectly still so that only moving parts of the scene become blurred while the rest remains sharp, with the motion blur of flowing water, clouds and wind-blown vegetation helping

Long Exposure Noise Reduction removes 'hot pixels' from long exposures, but doubles the time taken to record a picture

to create individual interpretations of some very familiar views.

But just how long is a 'long' exposure? A second? Several minutes? An hour? The truth is that there's no one-size-fits-all definition and it depends on the speed of the subject you're taking pictures of, as well as the effect you're trying to achieve. For instance, if you're shooting Formula 1 using an exposure time of 1/30 sec, then even that fraction-of-a-second exposure is ludicrously long relative to the subject's momentum, and that's going to deliver acres of motion blur. Used to photograph a calm sea, the same 1/30 sec exposure time would produce almost no motion blur. In fact, a very subtle amount of blur can end up looking like a mistake. So when you want to show the movement of the waves and the slow burn of clouds across a landscape, you're invariably chasing exposures that last several seconds to minutes.

Suffering from exposure

And you will end up chasing exposures. In broad daylight, shutter speeds that last for seconds can prove elusive. The lens you're using may not offer an aperture narrow enough to give shutter speeds that slow, even with the camera's ISO sensitivity cranked to its lowest value. Besides, using the narrow aperture available on a lens will only leave you with a soft picture, so it's unlikely you'll want to stray too far from f/11 to f/22 – further reducing your shutter speed options. To get around this problem you'll need to reduce the amount of light that's able to enter the lens, and the most effective way of doing this is by using a neutral density (ND) filter.

These filters are available as both circular screw-on filters and as part of a square filter system, such as those from Cokin and Lee. They come in various densities of grey and



Quick fixes for long exposures

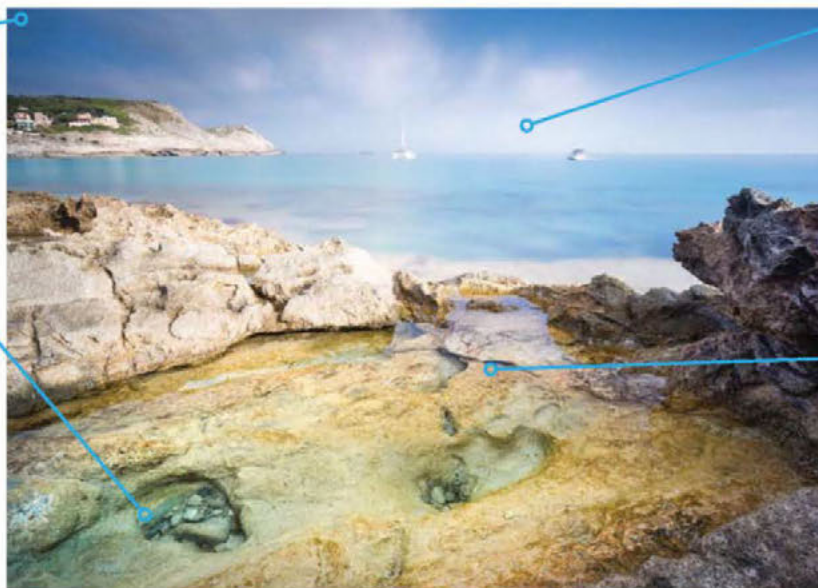
There are a number of aspects you should be aware of if you're going to get good results...

Dark corners

If you stack filters, there's a chance you'll see the edge of the front filter in the corner of the image. It's worth checking the Live View screen before you shoot – unlike most viewfinders, this shows the full 100% view.

White balance

Very strong ND filters can leave your pictures with a colour cast. You can fix this by choosing the Kelvin (K) option in the White Balance menu, but we'd recommend changing the Picture Quality to Raw and altering the white balance when you process the image instead.



ND grad

If the sky is brighter than the land, there's a chance that detail here will be burned out, especially if you use a very long exposure. To solve this, fit an ND grad filter in front of the ND filter, with the dark portion over the sky.

Circular polariser

The amount of light passing through the filter is reduced by around 2.5 stops at full polarisation, which needs to be factored into your long exposure calculations.

can be used in different combinations to give you plenty of options when it comes to finessing the long-exposure effect. Each ND filter is rated by the amount of exposure 'stops' of light it blocks. As the name indicates, a 3-stop filter reduces the light so that a shutter speed three stops slower than would normally be used to record a picture is required. If your camera suggests an exposure of 1/40 sec at f/16 without a filter,

then adding the three-stop ND would let you achieve the same overall exposure using 1/5 sec at f/16. Remember that each stop represents double the length of exposure; so 1/40 to 1/20 is the first stop, 1/20 to 1/10 the second stop and 1/10 to 1/5 the third stop. Somewhat confusingly, though, the same 3-stop filter can be rated 'ND8' or '0.9ND', depending on the system that different manufacturers use. ▶

“A very subtle amount of blur can simply end up looking like a mistake”

STEP BY STEP

Set up your Canon D-SLR for long exposures

Four simple steps to get your camera ready for slow-shutter-speed shots



Select Bulb mode

1 Bulb mode allows you to shoot slower than 30 secs. Some cameras have a dedicated Bulb option (B) on the mode dial. If yours doesn't, select Manual mode (M) and scroll past 30 secs until 'bulb' appears.



Use a remote release

2 Bulb mode starts the exposure when you press the shutter release and ends it when you take your finger off it. You'll likely jerk the camera when you do this, so it's far better to use a remote release instead.



Block the viewfinder

3 You need to prevent stray light from entering the viewfinder or you may end up with ghostly halos. The 1D X has a built-in viewfinder blind, while other Canon D-SLRs come with a replacement rubber eyepiece.



Activate Live View

4 Live View enables you to compose and manually focus, even with a strong 10-stop ND filter on the lens. Take a spare battery – the combination of long exposure times and Live View chews through the power.

ND filter strength

Your choice of shutter speed make a massive difference to the look of your long exposures. Too fast and the sense of motion will be almost imperceptible to viewers, too slow and you'll lose all texture in moving parts of the scene. Either might be acceptable though, depending on the look you're after. Here, we used three popular strengths of ND filter, as well as a naked lens, to illustrate some possibilities. You can see that even the 3-stop ND filter softens the surface of the river just enough to make it fight less with the buildings for attention than in the naked shot. Step up to the 6-stop and the sense of motion is noticeably stronger without losing texture in the water's surface; by the time you reach the 10-stop there's no detail in the sky and the water looks like ice. Each picture offers a different take, with the choice coming down to personal preference.



Equivalent exposures

Here's a handy table illustrating some common shutter speeds, along with the adjusted shutter speed for a range of filters. Read down the 'No filter' row to find the shutter speed reading you get without a filter in place, then read across the column to the strength of the filter you have in front of the lens. The precise shutter speed may vary by 1/3 to 1/2 stop, depending on the filter manufacturer and strength of the filter. When you reach the likes of a 10-stop ND, some filters from the same maker may turn out to be closer to 9.5 stops in while others are nearer 11 stops. Experiment to find out!

ND filter strength						
No filter	2-stop (ND4 or 0.6ND)	3-stop (ND8 or 0.9ND)	4-stop (ND16 or 1.2ND)	6-stop (ND64 or 1.8ND)	8-stop (ND256 or 2.4ND)	10-stop (ND1024 or 3ND)
1/1000 sec	1/250 sec	1/125 sec	1/60 sec	1/15 sec	1/4 sec	1 sec
1/500 sec	1/125 sec	1/60 sec	1/30 sec	1/8 sec	1/2 sec	2 sec
1/250 sec	1/60 sec	1/30 sec	1/15 sec	1/4 sec	1 sec	4 sec
1/125 sec	1/30 sec	1/15 sec	1/8 sec	1/2 sec	2 sec	8 sec
1/60 sec	1/15 sec	1/8 sec	1/4 sec	1 sec	4 sec	16 sec
1/30 sec	1/8 sec	1/4 sec	1/2 sec	2 sec	8 sec	32 sec
1/15 sec	1/4 sec	1/2 sec	1 sec	4 sec	16 sec	1 min 4 sec
1/8 sec	1/2 sec	1 sec	2 sec	8 sec	32 sec	2 min 8 sec
1/4 sec	1 sec	2 sec	4 sec	16 sec	1 min 4 sec	4 min 16 sec
1/2 sec	2 sec	4 sec	8 sec	32 sec	2 min 8 sec	8 min 32 sec
1 sec	4 sec	8 sec	16 sec	1 min 4 sec	4 min 16 sec	17 min 4 sec
2 sec	8 sec	16 sec	32 sec	2 min 8 sec	8 min 32 sec	34 min 8 sec

It's all about the timing...

Once you know the length of exposure you need to use, what's the best way of timing it? There are many filter apps for smartphones that will do this for you, in addition to helping you work out what shutter speed is required in the first place, along with any adjustments for other filters that are stacked on the lens.

Some EOS cameras offer a bulb timer as well. Obviously you can do the timing yourself using a watch or a phone, but don't worry too much if you're not precise when it comes to measuring very long exposures – a few seconds here or there won't make much difference when you're talking about exposures that stretch for minutes.



Above Use a remote release to hold the shutter open, then follow the timer



Left The NDTimer app (three60.com/ndtimer) offers a simple interface for working out the exposure, along with a timer



6-STOP ND
4 SECS



10-STOP ND
70 SECS

A 3-stop filter might produce a long enough exposure in low light, but in the middle of a calm, bright day it's unlikely to have much of an impact on the image. That's why many keen landscape photographers reach for the 10-stop ND filters. These filters are so dark that you won't be able to see anything through the viewfinder when you fix them to the front of the lens – although Live View helps here. That 1/40 sec exposure? With a 10-stop ND, that's now a 25-sec exposure. Stack a 10-stop ND with another ND filter or a circular polariser (which also cuts the amount of light by up to 2.5 stops) and you're likely to go beyond the realms of the

exposure system for your camera. Your camera maxes out at a shutter speed of 30 secs – anything longer than this requires you to time the exposure yourself using your camera's Bulb mode.

Whatever shutter speed you choose for your long exposure, you're going to need a tripod. You'll also need to approach the shooting as rigorously as you would your other pictures, triggering the shutter with a remote release and using Live View or Mirror Lock-up to prevent vibrations. The slapping action caused by an unlocked mirror may only last a tiny amount of time and is unlikely to register in a very long exposure, but it's not worth the risk. ■

Avoid the narrowest aperture!

Although the narrowest aperture on your lens will produce the longest exposure time, you really shouldn't use it as the effects of diffraction are most noticeable at this setting. Diffraction is when the light rays coming through the lens are essentially bent out of shape by the edges of the small hole, leading to fuzzy results even when the lens is focused accurately. This happens at all aperture settings, but is most noticeable at the narrowest settings – such as f/32 on the 70-200mm lens we used here. Viewing the image at 100% shows just how bad the effect can be.



5 hints and tips for...

Super-telephoto lenses

Every month we highlight an EOS camera or type of lens and provide priceless advice to get more from your gear

1 Get close

If you're shooting wildlife, don't think a 600mm prime will be the answer to all your image size problems. You still have to get surprisingly close with a super-telephoto lens if you're going to fill the frame, so factor in the cost of a hide to your bill.



2 Lens plate

A foot plate is an essential super-tele accessory that enables you to slide the lens backwards and forwards in the tripod head for a better balanced rig. You may need a ball head upgrade too, as your current one may not support the lens weight.

3 Set the focus

Canon's cannons have a Set button that allows you to preset a focus distance; handy for speeding up focus acquisition on a bird or animal if you know a point they're likely to move to.



4 Fight the power

A useful autofocus feature, if you shoot video, is Power Focus (PF), which you'll find on the AF slider on the lens barrel. This adjusts the focus at a constant speed, for smooth transitions when you want to pull focus between two points.

5 In the hood

Using the hood provides some level of protection should the lens nose-dive to the floor from an unattended tripod. Make sure the lens is insured, even if hiring it (and we'd hire rather than buy one of these beasts every time).





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Our experts tackle your Canon D-SLR and photographic problems

CAMERA KIT

What's the score with studio flash kits?



I'd like to upgrade from a flashgun to a studio flash kit, for taking portraits and other indoor shots. However, I don't really know what to buy, how to use the equipment, and what camera settings to choose. Can you give me a few pointers?

Jim Stilwell Hereford



Peter says

The main advantage

of a studio flash setup is that you'll be able to get a much softer and more flattering lighting technique. This is because, once a brolly or softbox is fitted to a studio flash head, the

light source becomes much bigger than that of a flashgun. Most kits contain pretty much everything you need, including a pair of studio flash heads, light stands and either brollies or softboxes, or a combination of both. You can also expect all the cables you need to be included, like mains cables for powering the flash heads, and sync cables for triggering them from a camera. There can be a catch though, because entry-level D-SLRs and even some enthusiast cameras no longer have sync terminals for connecting them to a flash head.

To remedy the situation, studio flash kits now often include wireless triggering. Receiver units are built into the flash heads and a transmitter module is supplied, which slots into the camera's hotshoe. This is used in one of our top favourite studio flash kits, the twin-head Elinchrom D-Lite RX 4/4 Softbox Kit, which costs around £640. A good but less expensive alternative, that also features built-in wireless triggering, is the Interfit EX400 Ti Twin Head Flash Kit at about £450. If the kit you buy doesn't include wireless triggering, you can buy a hotshoe adaptor for cable triggering at around £10.

A pair of flash heads enables wide-ranging setups and styles, with a flattering quality of light



Alternatively, a wireless trigger kit, like the Lastolite Lumen8 Radio Trigger Set, costs around £50 and contains both a hotshoe mounting transmitter and a receiver for plugging into one of the flash heads. Additional flash heads, if you're using more than one, can be set to slave mode, so they'll be automatically triggered from the main head.

A 'grey card' is a useful but inexpensive extra to buy, for setting white balance and exposure. The Lastolite Ezybalance Grey Card is a good option and costs around £20. Fabric or paper backgrounds are good to have, and you might also consider investing in a flash light meter, like the Sekonic Flashmate L-308S, which is about £140.

Unlike using a dedicated flashgun, studio flash heads don't enable automatic TTL (Through The Lens) flash metering. Instead, settings for both the camera and the lights themselves are purely manual. Adjustments are quite simple though, so don't be put off. For optimum

quality, it's best to use set a low sensitivity setting in the camera, typically of ISO100. Turn the shooting mode dial to its Manual position and select an aperture of f/8 and a shutter speed of 1/125 sec. These are good settings for getting the best out of the attached lens, while also not exceeding a safe shutter speed, so that you don't get a dark bar at the bottom of the frame when synchronising the camera with the studio lights.

Next, position your main flash head, with its brolly or softbox attached. Place your grey card as close as possible to where your portrait sitter's face (or whatever else you're going to shoot) will be in the scene and take a test shot. Create a custom white balance setting and adjust the power of the flash head for a correct exposure (see walkthrough). If you're using an additional flash head, for example placed behind and to one side of a portrait sitter's head for illuminating the hair, adjust the power of the secondary head for best effect.

STEP BY STEP How to set up studio flash heads



Stable support

1 Studio flash heads can be quite bulky, once loaded with a brolly or softbox. It's therefore important to give them a firm footing, especially when they're raised to a lofty operating height. Pull out the legs at the bottom of the lighting stand so they're at the widest possible angle, and position the flash head so that it directly overhangs one of the legs.



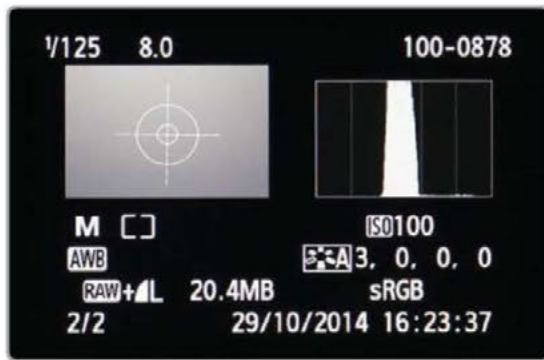
Attach a softbox

3 Softboxes are trickier to set up but the light from the flash head is more controllable, due to sides that stop light spilling out into the rest of the scene, bouncing off walls and ceilings. They typically have a frame that's made from metal poles inserted into the mounting ring. The box section then fits over the poles and, finally, a translucent cover attaches to the front.



Fit a brolly

2 With a silver brolly, you point the flash head directly away from the target, so that light is bounced back towards them, while you 'shoot through' white translucent brollies, aiming the flash head at the target. In both cases, insert the brolly shaft into the flash head's receptacle and slide it through until light from the head doesn't spill over the circumference.



Use a grey card

4 Place a grey card as close as possible to the main subject, so that it's facing the camera and illuminated by the main flash head. Take a test shot in which the grey card fills the image frame, and use the shot to create a custom white balance. For exposure settings, adjust the power of the studio flash heads so that the spike in the histogram display is fairly central.

PhotoPlus Quick Fix

Macro DOF

Q I've noticed that the hood for the new 18-55mm IS STM lens is petal shaped, whereas the hood for my older non-STM version of this lens is circular. Why are they different?

Gordon Wilkes Harrow



Angela says

In the older style lens, the front element rotates during focusing, so it requires a circular lens hood to avoid vignetting as the hood rotates. With the newer STM lens the front element remains fixed. This enables a more efficient petal-shaped hood, which stops more stray light entering from the top, bottom and sides.

PhotoPlus Quick Fix

ZoomBrowser EX

Q I recently attended a talk at my camera club where the speaker said that she didn't use Photoshop to edit images, but tweaked them in Canon's ZoomBrowser EX. Is this a good option?

Don Boyd Liverpool



Hollie says

ZoomBrowser EX and its replacement, ImageBrowser EX, are really designed for downloading images from your camera and organising them. You can carry out basic edits to JPEG files, like auto correction, increasing sharpness and adjusting colour and brightness, but you can't perform more advanced tasks, or edit Raw files. ▶



What to look for... Memory cards



Hollie says Get the speed you need without paying over the odds

1 Fast memory cards are essential if you're shooting Raw images in Continuous drive mode. They'll ensure that the camera clears its memory buffer as quickly as possible.

2 SDHC/SDXC cards with UHS-1 (Ultra High Speed bus) enable faster performance in cameras that can take advantage of the extra speed, like the 100D, 650D and 700D.

3 For the fastest CompactFlash cards, look for those that sport later editions of the UDMA bus.

4 Fast 'sustained' write speeds are vital for HD video. For SD cards, you're best off with Class 10 cards when capturing full 1080p HD video.

5 16GB and 32GB cards typically give the best value for money.

CAMERA KIT

Superzoom or telephoto?

Q I have a Canon 700D and 18-55mm IS STM kit lens. I'm considering adding either the Tamron 16-300mm f/3.5-6.3 Di II VC PZD Macro or the Canon EF 70-300mm f/4-5.6 IS USM. Which lens would you advise, for taking my photography to the next level?

Matthew Brooke Isle of Skye



Angela says The Canon EF-S 18-55mm f/3.5-5.6 IS STM kit lens is a little gem. It's small and light, yet well built and delivers very good image quality. The STM (Stepping Motor) autofocus system is rapid and completely silent. There's a lot to be said for continuing to use this lens as a 'standard' zoom, and supplementing it with an additional 70-300mm lens. The Canon EF 70-300mm f/4-5.6 IS USM is certainly a good option. Again, it's well put together and, as a genuine Canon lens, enables in-camera corrections for peripheral illumination and lateral chromatic aberration (colour fringing) when using recent and current cameras like the 700D. Even so, the competing Tamron SP 70-300mm f/4-5.6 Di VC USD lens is sharper and has faster autofocus. We'll be comparing both these lenses, and other budget telephoto zooms, in next month's Super Test.

An alternative is to go for a superzoom lens. Our current favourite is the Tamron 16-300mm f/3.5-6.3 Di II VC PZD Macro. It has a class-leading zoom range that not only extends further than competing lenses at the telephoto end, but also gives greater wide-angle coverage, zooming out to a 16mm focal length rather than the more usual 18mm. As with any superzoom lens, there

are certain compromises when it comes to image quality. In this particular case, sharpness and contrast are impressive throughout the mighty zoom range, but distortions are more noticeable than when using a pair of standard and telephoto zoom lenses. Money-wise, the Tamron 16-300mm lens will cost you about £530 to buy, so it's rather more expensive than buying the additional Tamron 70-300mm at about £290.

The main advantage of buying a superzoom lens is that you can react quickly to almost any shooting opportunity, without the need to swap lenses. But unless you really need the all-in-one convenience of a superzoom, we'd suggest hanging onto your EF-S 18-55mm IS STM and buying the additional Tamron SP 70-300mm Di VC USD.



Superzooms make good walkabout lenses but, for ultimate image quality, it's better to use a pair of standard and telephoto zooms

CAMERA SOFTWARE

How do I use tethered shooting?



Can you recommend a program so that I can control my EOS 700D and shoot remotely from a computer?

Val Dickson Bromley



Adam says Canon EOS cameras come with a free program called EOS Utility, which does the job admirably. Here's how it works...



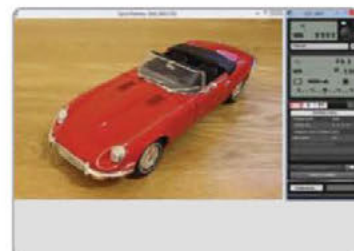
Get connected

1 Connect the camera to your computer via a USB cable. Switch the camera on, launch EOS Utility, and click on Camera settings/Remote shooting.



Remote Live View

2 Use Remote Live View to preview images before you shoot. A magnified option enables precise focusing, ideal for close-ups or long telephoto lenses.



Shoot and store

3 In the main control window, you'll see a virtual shutter button. Click this to take a shot. It'll be automatically downloaded and stored on your computer.

CAMERA SKILLS

Can I really use autofocus when using an extender?

Q Canon says that if you use its 70-200mm f/4L lens with a 2x extender, autofocus will only work with an EOS 1 series camera. I've found that, even when using both a 1.4x and 2x extender simultaneously with this lens on my 500D, to take pictures of the moon from an open window, I can autofocus when shooting remotely with EOS Utility software. Have you experienced this as well?
Graham Dargonne Worthing

Hollie says It's perfectly possible to autofocus with relatively narrow apertures in tethered shooting mode (see previous page). The crucial factor is that you'll be using Live View shooting mode, in which the camera switches from using its regular phase-detection autofocus module (employed during viewfinder-based shooting), to contrast-detection autofocus, which is measured via the camera's actual image sensor. This bypasses the phase-detection autofocus module altogether.

Theoretically, you can focus at any aperture using Live View. When you stop a lens down to, say, f/11 or f/22, Live View autofocusing still occurs in real time, at whatever aperture you've set. One thing we've noticed, however, is that when using a 2x teleconverter with long telephoto lenses, Live View autofocus can be painfully slow and prone to error, even on a 70D that has relatively



Using Live View, you can autofocus at any aperture, no matter how narrow. This bypasses the usual requirement of at least f/5.6 or thereabouts in most cameras, and f/8 in EOS 1 series and 5D Mk III bodies

fast phase-detection autofocus in Live View and video capture shooting modes, thanks to its 'Dual-pixel CMOS AF' image sensor. It's often necessary to manually focus the lens so that you're in the right ballpark, and then let contrast-detection autofocus take over.

PhotoPlus Quick Fix

Central AF point

Q Am I right in thinking that, if I select multipoint autofocus with AI Servo mode, my Canon D-SLR will use the central AF point initially, then automatically switch to other AF points, if necessary, to track moving targets?

Steve Bower Chiswick

Angela says That's certainly the tradition in Canon D-SLRs, and it works very well for erratically moving targets, or when using very long telephoto lenses that can make it difficult to keep objects centred in the frame when panning. However, the 70D and 7D Mk II go one better, enabling you to choose which AF point to use initially, before automatically switching to other AF points, if needed.

CAMERA SKILLS

How can I be a sharper shooter?

Q On a recent trip, I took both my 6D and older 450D cameras. For shooting an eagle in flight, I used the 450D with a Sigma 150-500mm lens; the main reason for this was the extra 1.6x crop factor. Due to poor light, I used a sensitivity setting of ISO800, a stop short of the maximum ISO1600. However, the results look quite grainy, so I'm wondering if it would have been better to use the 6D?

Butch Browne Louisville, Kentucky, USA

Angela says It was definitely a good call to use an APS-C-format camera to extend the telephoto reach of your Sigma 150-500mm lens, giving a maximum 'effective' reach of 800mm. The main upside is that it requires less severe cropping of the final image. However, clean image quality with good noise suppression and retention of fine detail is one of the main areas in which newer Canon cameras beat their older counterparts. As such, you could expect

much better image quality in these conditions from bodies like the 700D and 70D.

It's a good idea to use Tv (Time value) shooting mode for birds in flight, and to set a fast shutter speed of 1/2000 sec or even faster. Use this in conjunction with Auto ISO, which will bump up the sensitivity by as much as necessary to compensate for dull lighting conditions. Finally, when shooting against a bright sky, +1EV or so of exposure compensation can help to avoid a bird, plane, or other object in flight from looking too dark. If you have to boost the brightness very much, even when editing Raw rather than JPEG images, image noise will be increased. ■

Newer Canon D-SLRs excel at reduced image noise at high ISO settings – great for capturing birds in flight in dull conditions





PhotoPlus Your Photos

Get professional feedback on your favourite photos



Photo Critique

1 The image is nicely composed, and the all-important eye is perfectly sharp

2 The shot is well exposed to capture detail from the dark eye to the highlights

Meet our panel of experts



Peter Travers
Editor

Peter is our authority on Canon photography, and heads out with his trusty 5D Mk III at every opportunity.



Adam Waring
Operations editor

Adam fell in love with photography when he was a teenager, and he specialises in landscapes and travel.



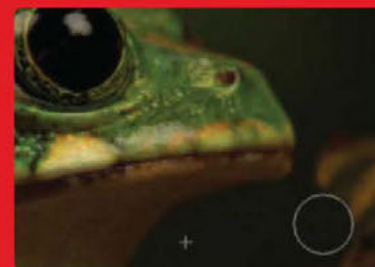
Hollie Latham
Staff writer

Hollie enjoys shooting portraits, and she's our resident expert on all things Photoshop.

STEP BY STEP

Now try this...

How Paul can enhance his froggy close-up with Photoshop Elements...



Clone the background

Take the Clone Stamp tool and clone out the bark, Alt-clicking to sample suitable background pixels. Press Shift+[to reduce the brush hardness when cloning close to the frog's head.



Float the Layers panel

Add a Brightness/Contrast layer, and set Brightness to 40. Add a Levels layer, set Midtones to 1.20 and Highlights to 230, then invert the mask and paint the effect into the frog with a white brush.



Boost the colours

Ctrl-click the mask to load it as a selection, then add a Hue/Saturation layer – the attached mask will be identical to the Levels layer's mask. Set Saturation to +15. Crop the image to finish. ▶



Tree Frog

By Paul Dixon



Canon EOS 7D
Canon EF 100mm f/2.8L IS USM Macro
Aperture **f/14**
Shutter speed **1/160 sec**



Paul says "I recently won a day-long photography workshop with Wild Arena at Knowsley Safari Park, near Liverpool. Canon made a range of equipment available for the winners to try, including the EOS 6D, 5D and 1D X. The morning was spent driving around the park using telephoto lenses, and I got to try out the EF 200-400mm f/4L IS USM Extender 1.4x and EF 500mm f/4L IS USM. In the afternoon we took macro shots in a small studio. This tree frog was placed on a twig positioned between two studio lights, and a fine water mist was sprayed onto it and into the air. I knelt down to take the picture from slightly below, focusing on the eye."



Peter says "You were very lucky to get the chance to try out all that high-end Canon kit Paul, although of course your 7D and 100mm f/2.8L are no slouches either, as this image shows. Amphibians and reptiles make great wildlife subjects, thanks to their colourful and intricately detailed skins, and tree frogs have the added appeal of those huge eyes. You've focused this shot nicely to ensure the eye is sharp, although the depth of field falls off a little too quickly for my liking because of the 100mm focal length – a slightly narrower aperture would have kept more of the head sharp. The frog is fairly well positioned in the frame, but the object that looks like a piece of bark in the bottom-right corner is distracting, as it butts up against the frog's chin and is similar in colour to the frog's underside. I've cloned the object out; this is a relatively easy job, as the background has smoothly graduated and blurred tones, although it's important to preserve the slightly out-of-focus edges of the frog's head. With that done, I've made the frog stand out more from the background by lightening it, and boosting the colours and contrast with adjustment layers. Finally, I've cropped the image to make the frog a bit larger in the frame."

3 The background object in the bottom-right of the frame is a little bit distracting

A30 Bridge

By Benoit Larochelle



Canon EOS 7D
Canon EF-S 17-55mm f/2.8 IS USM
 Aperture **f/8** Shutter speed **1/60**,
1/250, 1/1000 sec and 8 mins



Benoit says "This shot was inspired by the work of Joel Tjintjelaar, who specialises in black-and-white fine art and long-exposure photography. This is my own approach to what Tjintjelaar calls 'iterative selective gradient masks', which basically involves combining multiple exposures to create volume and shading. I shot an eight-minute exposure for the water, using a 16-stop ND filter, then captured three bracketed exposures and blended parts of these shots for the bridge and sky; all the post-processing was done in Photoshop. I like the idea that photography can be extended beyond simply taking single pictures."



Adam says "This is a striking mono image Benoit, and well worth the considerable amount of work you've put in, both in capturing the exposures and in post-processing. The secret to creating this sort of image is in the



choice of subject and the composition, and also in choosing the right areas from the various exposures to include in the final image – and you've done really well on all counts. My only suggestion would be to leave more space between the far end of the bridge and the edge of the frame – it feels a little squeezed-in, and if you look at Tjintjelaar's own Bridge Study series he often includes large expanses of water and sky, with the bridge relatively small in the frame."

PhotoPlus Verdict

- ✓ A beautifully conceived and processed fine art image
- ✓ Bracketed exposures capture detail throughout the tonal range
- ✓ Excellent conversion to black and white with added extra vignetting
- ✗ Try a wider shot with a greater expanse of sky and water

Hard Life

By Sudad Al-Ajili



Canon EOS 60D
Sigma 18-35mm f/1.8 DC HSM A
 Aperture **f/1.8**
 Shutter speed **1/320 sec**



Sudad says "The war in Iraq has had a tremendous impact on children – they haven't seen much in their lives except destruction. I took this in an old neighbourhood of Baghdad, and the title was inspired by the Charles Dickens novel *Hard Times*. The boy was walking to a shop to buy candy; when he saw me with my camera he was

a little hesitant, so I waited for him to relax and act naturally, and took a few photos. I converted the wall to mono in Lightroom, as I wanted the focus to be on the boy, to capture his innocence. The banknote he's holding is 250 Iraqi dinar – less than 15p."



Peter says "This is an engaging reportage shot, Sudad, and wouldn't look out of place in an international news magazine. It's nicely composed and exposed, and the f/1.8 aperture creates a shallow depth of field. But it's the boy's expression that makes the shot, and shows that eye contact isn't always necessary for this kind of portrait – he appears oblivious to the camera, preoccupied with his own concerns. My one criticism is: did you need to make the wall mono? Its faded sandy colours aren't a distraction, and for a documentary feel I'd want to keep things true to life – the 'colour pop' effect makes the image feel more staged and less candid."



PhotoPlus Verdict

- ✓ A great example of opportunist reportage photography
- ✓ The shot is well composed and focused, with a lovely shallow depth of field
- ✗ The 'colour pop' effect doesn't really add to the image, and makes it look unnatural



Perth City

By Matthew Sellwood



Canon EOS 600D
Canon EF-S 18-55mm f/3.5-5.6 IS II
Aperture **f/9**
Shutter speed **30 secs**

Matthew says "Perth has a good vibe during the day, but it really comes alive at night, and for this shot my father drove me up to Kings Park, above the city. I set up my 600D on a tripod, and set the shutter speed to 30 secs to capture the available light and create light trails in the traffic. I boosted the saturation and contrast slightly to give the image more punch, and cropped it to get rid of some of the sky and foreground bushes. I'm really pleased with the

result, and next time I'd like to take multiple shots and create a panoramic view of the city."



Hollie says "This is a very well executed night-time cityscape. However, while I like the warm street lights contrasting with blue/purple lights of the buildings, there's not a lot of colour in the image as a whole; converting to mono produces a more dramatic image, and enables us to bring out the detail in the buildings and road network, which is a blur of yellows in the colour image. I've used Elements' Convert to Black & White command, choosing different presets for the skyline and roads, and

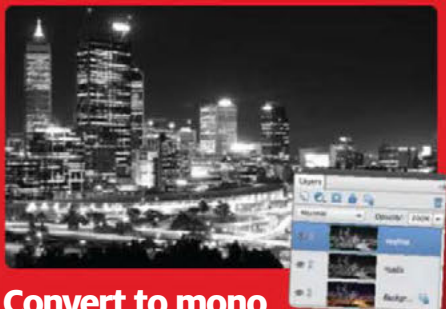
SEND US YOUR SHOTS!

Would you like your images critiqued by the *PhotoPlus* team? Email hi-res JPEGs and 100-word captions with exposure info to photoplus@futurenet.com with 'Your Photos' as the subject line. Or by post to *PhotoPlus*, Future Publishing, Quay House, The Ambury, Bath BA1 1UA.

combining the effects before burning selected midtones with a Levels adjustment layer. The patch of clipped foreground foliage is a distraction, but if you cropped any more of it away you'd lose interesting detail in the road intersection – if you do shoot this scene again, try to find a vantage point free of such clutter."

STEP BY STEP Now try this...

How Matthew can convert his night cityscape to mono in three simple steps in Photoshop Elements



Convert to mono

Duplicate the 'Background' layer, go to Enhance > Convert to Black & White and select Portraits, then convert another duplicate layer above the first one using the Newspaper preset.



Mask out clipped highlights

Add a mask to the top layer, and paint with black over the road and other areas where highlights are clipped to reveal the converted layer below.



Burn midtones

Add a Levels layer, and set Midtones to 0.48 and Highlights to 236. Invert the mask to black, and paint with white to darken midtones around the roads and in the lighter buildings. ■

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Angela Nicholson
Head of testing
angela.nicholson@futurenet.com

Welcome...

This issue we have the pleasure in announcing the Canon Gear of the Year Awards. We have ten pages full of the very best Canon D-SLRs, lenses and accessories from 2014. We've picked Best On Test winners from our monthly Super Tests, as well as including other deserved winning gear of the year. Whether you're a beginner, enthusiast, semi-pro or pro photographer, we've narrowed down the top Canon cameras, lenses, flashes or tripods to suit your needs. See page 95.

Five long years ago Canon released the EOS 7D, a groundbreaking D-SLR at the time that wowed both enthusiasts and wildlife/sports pros. For the past three-to-four years we've all been waiting for the 7D Mark II. Well, now it's finally here, and we've had time to give the 7D Mark II the full *PhotoPlus* test treatment. And I can safely say that it's been worth the wait! It's an exceptional camera for enthusiasts, packed with the latest sensor, autofocus and processing technology that combine to make taking pictures an absolute joy. Find out more in my ultimate in-depth test over the page...

86 **Full Test: Canon 7D Mark II**

The final verdict on the most hotly anticipated new D-SLR test of the year

95 **Canon Gear of the Year**

All the very best Canon EOS D-SLRs, lenses and accessories from 2014

107 **Landscape Photography Kit**

Four choice pieces of gear to help you take better landscape photos

AWARDS SPECIAL!



**CANON GEAR OF
THE YEAR 2014**

Page 95



**ULTIMATE TEST!
CANON 7D MARK II**

Page 86

THE PHOTOPLUS RATINGS EXPLAINED

When it comes to reviewing products and services in *PhotoPlus*, we tell it like it is. We're totally independent from Canon and will never give someone a good score just because they advertise. Eyes right for a guide to our specific awards...



Only the best of the best receive our coveted award



Buy for the best combination of quality and value



Given to the kit you've used and rated the highest



Canon EOS 7D Mark II

ULTIMATE TEST!

**WATCH
THE VIDEO**



“Canon has given the new 7D Mark II a pair of Digic 6 processing engines”



Angela Nicholson asks whether Canon's latest hi-tech D-SLR for serious enthusiasts, with its new sensor, dual processors and top-end AF and metering systems, was worth the five-year wait

Price (RRP): £1,599 **Web:** www.canon.co.uk
Availability: Out now!

As you might guess from its name, the new Canon EOS 7D Mark II replaces the 7D, which first appeared way back in 2009. It therefore assumes its place above the APS-C-format 70D and below the full-frame 5D Mark III in the Canon D-SLR enthusiasts lineup. It packs in far more advanced tech than the 6D, but forgoes this camera's 20.2Mp full-frame sensor for a new APS-C sensor of the same resolution, that has redesigned micro lenses that allow more light to pass through onto the photo diodes.

To boost performance and enable a maximum continuous shooting rate of 10fps (frames per second), Canon has given the new camera a pair of Digic 6 processing engines. With a fast-enough memory card installed, up to 31 Raw files or 1,030 JPEGs can be shot in a single burst. If you need to shoot for more than 3.1 seconds, the High-speed Continuous shooting rate can be set between 2-10fps, while the Low rate can be set between 1-9fps and Silent mode between 1-4fps.

The sensor and processing engines combination also allows a native sensitivity range of ISO100-16,000, which is the highest native setting of any Canon APS-C camera, with expansion settings going up to ISO51,200.



The 7D Mk II's new sensor and 252-zone metering capture accurate exposures, even of tricky black and white subjects

While the original 7D has 19 autofocus points, all of which are cross-type, its replacement has a class-leading 65 cross-type points. With f/2.8 lenses the central point is dual-cross type for extra sensitivity and is capable of operating when lens and teleconverter combinations take the effective aperture down to f/8.

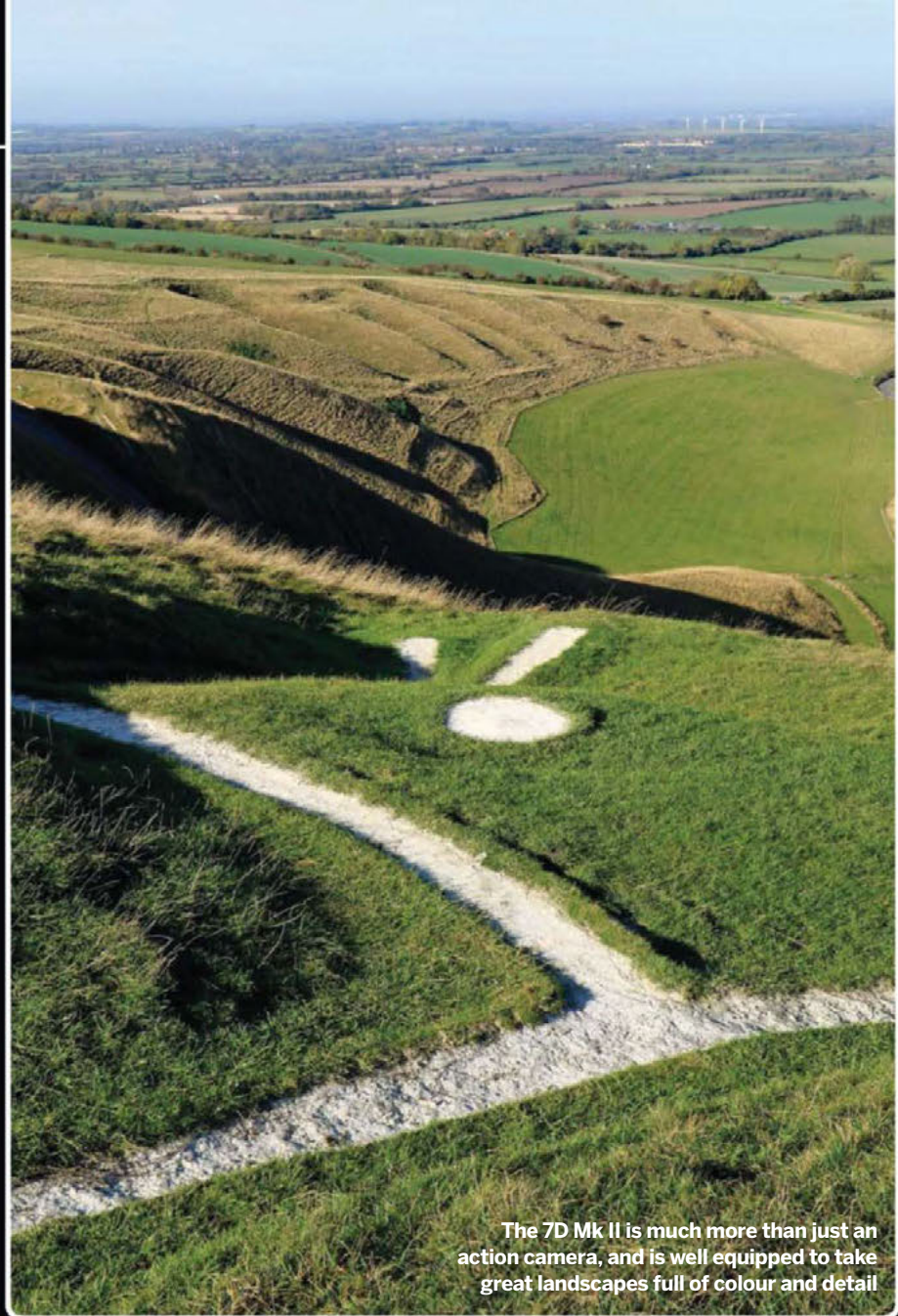
Like the EOS-1D X and 5D Mark III, the 7D Mark II also has EOS iTR AF and AI Servo AF III autofocus technologies, which allow you to adjust tracking sensitivity, acceleration/deceleration tracking and AF point auto switching options to help keep moving subjects sharp. As with the 1D X and 5D Mark III, these features can be adjusted via a collection of 'case studies'.

There are also seven AF point selection modes that enable the photographer to set the starting AF point and, in continuous AF mode, tell the camera how to track the subject if it moves.

Like in the 70D, there's a Dual Pixel AF system, which operates in Live View and video shooting modes. Videographers will love the ability to slow the focusing down to produce more cinematic transitions.

Speaking of Live View mode; the 7D Mark II has a 3-inch, 1,040,000-dot LCD screen for composing and reviewing images and movies. There's also an optical viewfinder that shows 100% of the scene

“The 7D Mark II is the most weather-resistant Canon EOS D-SLR after the 1D X”



The 7D Mk II is much more than just an action camera, and is well equipped to take great landscapes full of colour and detail

and can display an electronic level as well as important information such as exposure mode, white balance mode, drive mode and the metering mode – the display can be customised via the menu.

Other notable features include: dual card slots (one SD/SDHC/SDXC and the other is CompactFlash), an intervalometer for shooting time-lapse sequences, HDR mode, multiple exposure mode, a built-in compass, and GPS technology to enable geotagging of images. Sadly, there's no Wi-Fi connectivity built-in; Canon tells us that it has been omitted because the metal used in the body of the camera may compromise Wi-Fi performance.

Build and handling

Canon has retained the magnesium alloy construction of the original 7D for the Mk II version, and the shutter has a claimed durability of 200,000 cycles, but it has uprated its weatherproofing so that it is the most weather-resistant Canon D-SLR

after the 1D X. This may in part explain the 90g increase in weight and slightly larger size. The camera also feels nice and solid, and the grip on the front of the camera and the thumb-ridge on the back have an excellent textured coating, so they feel really secure in your hand.

Owners of the original 7D will find the Mark II very familiar, but there are a few changes to the control layout. Like the 5D Mark III, there's a Rate button instead of the Picture Style button. A single press of this when reviewing an image gives it a rating of one star out of five. Press it again and the rating goes to two out of five and so on. These ratings are attached to the image EXIF data, so they are visible in software such as Canon's DPP and Adobe Bridge, making it easy to find your best shots when downloaded to your computer.

In place of the Q (Quick Menu) button on the 7D is a Creative Photo button that gives access to the picture style, multiple exposure and HDR options. In playback ▶



It might 'only' have an APS-C 1.6x crop sensor, but with the wide-angle focal length of 16mm we used here, we were still able to fit big scenes into the frame



“Images and video from the new Canon 7D Mark II look great straight from the camera. It's also capable of resolving an impressive level of detail”

Mode dial

You need to first push in a central button to turn the dial, preventing the selection of unintended exposure modes by accident

Viewfinder

The viewfinder gives a full-size 100% view, while an overlaid display shows vital shooting info and an electronic level

Button layout

The Q button has moved over to the right, while a Creative Photo button gives access to picture styles, multiple exposure and HDR options

Rear LCD

The 3in display is now a 3:2 ratio 1,040K dot device, and the Menu has adopted a thinner, more stylised font

Selection lever

The mini-joystick is now surrounded by a sprung lever, which can be used to modify the function of the Main dial

mode, this button enables you to compare two images side-by-side and scroll through your shots, rating as you go if you like.

There's also a new sprung selection lever around the mini-joystick control. This can be used to change the function of the Main dial in front of the shutter release on the top of the camera. When the switch is in use, the dial can be used to adjust one of a small collection of features; the preferred option is selected via the Customisation option in the Menu. It can be set to adjusting the sensitivity, AF point, AE lock, AE lock hold, switching to the central (or registered) AF point and accessing exposure compensation. The lever can also be used to set the AF point selection mode after the AF point button has been pressed; this is a convenient way of working as the lever is easier to locate than the M-Fn button (next to the shutter release) when the camera is held to the eye. Alternatively, the AF point selection mode can be set to use the large thumbwheel on the back of the camera (after pressing the AF point button).

The only noticeable difference between the top of the 7D and the top of the 7D Mark II is the arrival of a lock button on the chunky Mode dial. This button needs to be pressed before the dial can be rotated, preventing the accidental selection of an unintended exposure mode.

Like the original 7D, the Mark II's menu is divided into sensible sections and is logically arranged, with the autofocus

system having a dedicated section, including the list of six 'case studies' mentioned earlier. These control how quickly the camera responds to factors such as changes in subject distance or objects entering the frame.

The Live View switch needs to be set to the video option before pressing the menu button gives access to video controls; this is a convenient way of reducing the number of features listed at one time in the main menu, however, some of the stills image features, such as image quality, are also shown when the camera is in video mode.

ISO performance

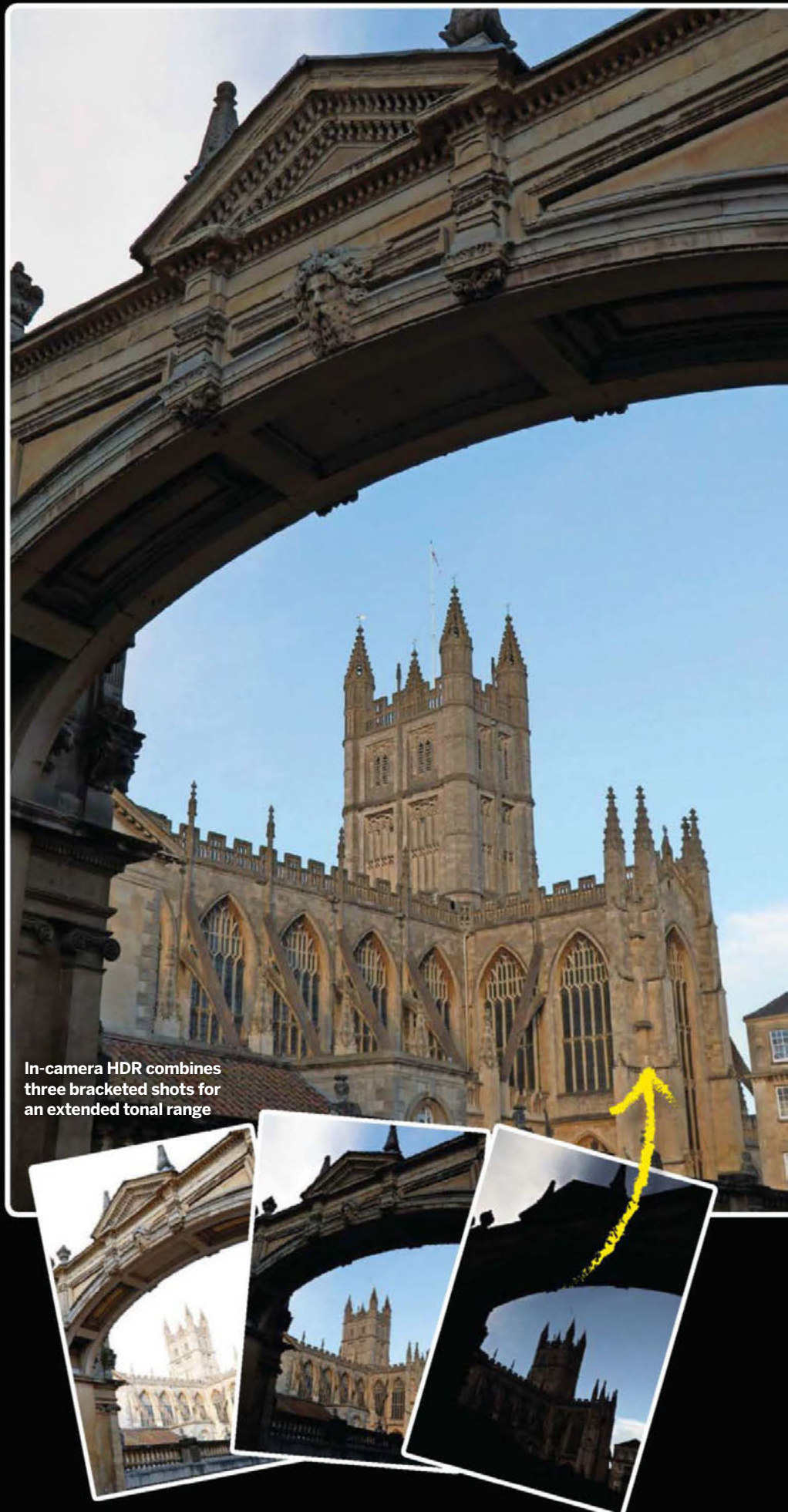
On the whole the images and video that the 7D Mark II produces look great straight from the camera. It's also capable of resolving an impressive level of detail.

Noise is also controlled well throughout the native sensitivity range, but as usual the expansion settings (the options that Canon considers not of sufficient quality for normal use) are best reserved for emergency situations and when images only need to be viewed at small sizes. JPEGs captured at the ISO51,200 expansion maximum have luminance noise visible at most normal viewing sizes and some areas appear bruised with green and magenta blotches.

Stepping down to ISO25,600 improves things significantly. There's still quite a lot of luminance noise visible, but the false colours are much better controlled. Moving down again to the uppermost native setting (ISO16,000) results in another serious improvement in image quality. There's a noticeable increase in detail resolution, although images still look a little soft at 100%, and less false colour is visible in JPEG files. Meanwhile, when all noise reduction is turned off the ISO16,000 Raw files have a hint of coloured speckling visible when sized to A3. Zoom in to 100% and this chroma noise becomes very noticeable, but there's still a respectable level of detail visible so it's possible to find a good balance between the two in post-capture processing.

At the other end of the sensitivity scale at ISO100, there's just the merest hint of luminance noise in some areas at 100% and images have lots of detail visible. Our lab tests also reveal that the 7D Mk II's ►

“Like the original 7D, the menu is divided into sensible sections and is logically arranged”



In-camera HDR combines three bracketed shots for an extended tonal range



ISO results

The original 7D has certainly been showing its age of late in terms of ISO performance, and while it has a native ISO range of ISO100-6400, anything above ISO800 is pushing it. The new 7D Mk II beats all recent APS-C cameras, with an unexpanded max ISO of 16,000, which is 1/3 stop higher than the 70D's ISO12,800. At ISO16,000 on the 7D Mk II, noise and colour rendition suffer a little, but at ISO12,800 noise levels are very well controlled, and images shots at ISO3200 and 6400 are clean, detailed and with good colours. As usual with Canon D-SLRs, in expanded (emergency) ISO settings of 25,600 and 51,200 noise and inaccurate colours are very obvious.



ISO100



ISO800



ISO1600



ISO3200



ISO6400



ISO12,800



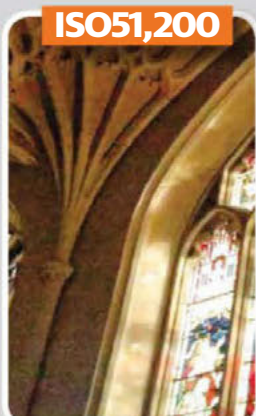
ISO16,000



ISO25,600



ISO51,200



“We’ve been looking forward to testing the 65-point AF system and it didn’t disappoint”

Raw files have around 2EV greater dynamic range when the lower sensitivity settings are used. This means that the Mark II can record a wide range of tones within a single shot and images stand up better to tonal adjustment. That’s useful in high-contrast situations, or if you don’t get the exposure just right in-camera.

Below ISO3200, the newer camera also produces Raw files with a stronger signal-to-noise ratio, which means it produces cleaner images with more detail.

252-zone metering

One of things that impressed us most about the 7D Mark II during our testing is its new 252-zone metering system, which gathers data from a 150,000-pixel RGB and infrared sensor. In the past we have found Canon’s iFCL metering systems a little frustrating in Evaluative mode because it can put too much weighting on the brightness of the subject under the active AF point so that, in high-contrast conditions, you can end up with badly over- or underexposed shots. It acts more like centre-weighted metering than some other systems.

The new system in the 7D Mark II, however, does a better job of taking the brightness of the whole scene into account. Naturally, there is still some weighting applied, but we found there are fewer occasions when the exposure compensation facility is required.

All that said, there seems to be a slight tendency towards bright images and some of my landscapes shot in bright conditions look better when the exposure is reduced by about -1/3EV, either in-camera or post-capture. In most cases, however, this slight overexposure isn’t at the expense of important highlights.

White balance

As we have found in the past with Canon D-SLRs, the 7D Mark II’s automatic white balance system does a great job of capturing the atmosphere of the scene. In bright sun it produces pleasingly warm tones and in overcast conditions it captures the coolness without going overboard and giving a blue tint; the results look natural.

Canon’s Standard picture style provides a good general purpose setting that

Editor's verdict: Canon EOS 7D Mark II



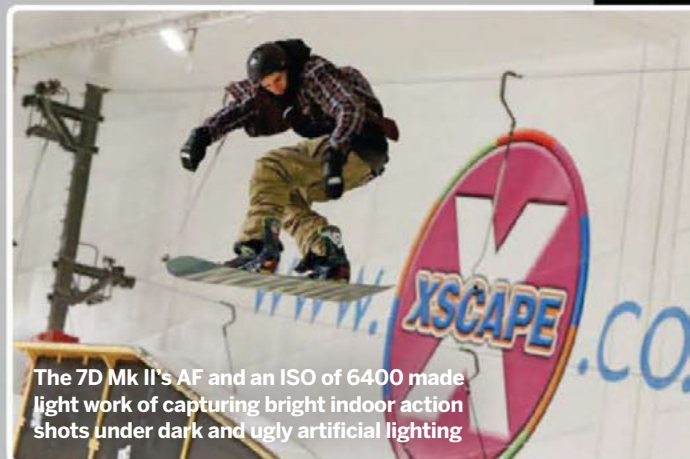
PhotoPlus editor Peter Travers says the new Canon EOS 7D Mk II has been worth the wait:

"Canon hasn't let us down with the 7D Mark II upgrade. It's a vast improvement on its old 7D predecessor, but it seems irrelevant to be comparing the new 7D Mk II against the five-year old 7D, as D-SLR technology has marched on so far since 2009. But compared to the newer 70D, the 7D Mk II is still a big step up in terms of specs and performance: both are 20Mp machines, but the 7D Mark II trumps the 70D with its dual processors, and better ISO range, AF points and fps.

When I was testing the 7D Mk II, it felt great in the hand; the new grip's really comfortable, the shutter button is hair-trigger responsive, and, coupled with its machine-gun 10fps frame-rate, it's a pleasure to shoot sequences of fast-action subjects. It also gets a new, cleaner menu design – even though it's just Canon's new slimline font.

For sports and wildlife, it's very impressive with its high burst speeds, responsive AF points/AF system, and high-ISO image quality. It didn't flinch when shooting snowboarders in low-light at ISO6400 in Milton Keynes Snozone indoor winter sports complex, the AF keeping up with even the fastest action, and no nasty image noise or artefacts. It produces detailed images all the way up to ISO12,800 – the original 7D really struggles with noise at anything over ISO800, so this is a very welcome improvement for sure.

Although it's billed as an awesome camera for sports and wildlife, it's also a brilliant all-rounder and great for all static subjects, too, from landscapes and cityscapes to portraits and macro, thanks to its excellent sensor and superb image quality. It exposed accurately when faced with high-contrast scenes (as long as I had the AF point over the correct area of the scene), and captured great landscape shots packed with detail and colour.



The 7D Mk II's AF and an ISO of 6400 made light work of capturing bright indoor action shots under dark and ugly artificial lighting

I enjoyed customising the 7D Mark II and using settings like multiple-exposures and HDR – the HDR Natural option looks, well, natural. The 65 AF point setup is easy to take advantage of, but I didn't feel the need to use any of the complicated AF Case Studies, mainly as the 'Case 1' multi-purpose factory setting wasn't struggling!

Overall, I found the Canon 7D Mark II performed admirably shooting all subjects in all conditions, and I just hope that, as I've been a very good boy this year, Santa will bring me one this Christmas!"

generates JPEGs with pleasant colours and decent saturation. The Landscape option is a nice alternative, with appropriate scenes, and unlike the Landscape settings on some other cameras it doesn't overcook the blues or greens. Their saturation is boosted, but it's safely within the realms of reality. The Portrait picture style is also good for people shots and it doesn't over-enhance reds or bring out pimples.

As usual, the Monochrome picture style produces rather dull or muddy images in its default setting. These can be improved by boosting contrast or tweaking exposure,

but the enthusiast nature of most 7D Mark II users means they are likely to use the picture style options as a guide and make Raw-file conversions post-capture.

Autofocus

We've been looking forward to testing the 7D Mark II's 65-point autofocus system and it didn't disappoint. It's both fast and accurate, and capable of working in very low light. It's also complex, with no less than seven focus point selection modes – Single Point Spot (Manual Selection), Single Point (Manual Selection), AF Point

Expansion (Manual Selection), AF Point Expansion (Manual Selection, Surrounding Points), AF Zone (Manual Selection of Zone), Large Zone AF (Manual Selection of Zone) and 65-point Automatic Selection AF – plus a collection of AF AI servo adjustment options (Tracking Sensitivity, Acceleration/Deceleration Tracking and AF Point Auto Switching) for use in continuous autofocus modes, so it takes a while to get used to it all. Provided you select the correct AF point selection mode and AF AI servo characteristics (which you set via a selection of shooting scenario ►



The 10fps high-speed shooting rate is perfect for capturing sports and action



Colours are rendered naturally and the 7D is excellent for portraiture, as well as action

Case Studies), it does a great job. We found 'Case 1' in the Shooting Scenarios list a good starting point that worked well when shooting BMX riders in action.

In addition, the hybrid AF system, which is available when composing video or still images on the LCD screen in Live View mode, is capable and able to find its target even in quite low light. With an STM lens mounted there's little back-and-forwards adjustment, even in fairly dull conditions, and although it's quite a large camera to use held away from your body, it is possible to use Live View mode when hand-holding the camera. It's a shame that the screen isn't on an articulating joint (Canon says this would compromise durability) as this would make composing shots at high or low angles much easier.

Switching from the 'Standard' to the slowest AF setting in the Movie Servo AF speed options has a significant impact upon the time the camera takes to focus the lens, moving the subject smoothly and cinematically into focus. If you need to speed things up, however, pressing the AF-on button snaps the subject into sharp focus quickly.

The 7D Mark II takes a new, higher capacity variety of the LP-E6 battery that the 7D uses. During one day of this test we shot over 1,000 images and used the GPS system throughout, and the battery still had power left, with the indicator only going down by a couple of bars. That's very respectable performance, especially bearing in mind that we did a lot of image reviewing and spent lots of time investigating the menu.

Tech specs 7D Mark II vs 7D



	Canon EOS 7D Mark II	Canon EOS 7D
Image sensor	20.2Mp Dual Pixel CMOS AF APS-C	18Mp CMOS APS-C
Image processor	Dual DIGIC 6	Dual DIGIC 4
AF points	65 cross-type (extra sensitivity dual cross-type at f/2.8 at centre)	19 cross-type (f/2.8 at centre)
ISO range	100-16,000 (expandable 100-51,200)	100-6,400 (expand to 100-12,800)
Max image size	5472x3648 (Raw/Large JPEG)	5184x3456 (Raw/Large JPEG)
Shooting modes	Scene Intelligent Auto, Program, Tv, Av, Manual, Bulb, Custom (x3)	Auto, Creative Auto, Program, Tv, Av, Manual, Bulb, Custom (x3)
GPS	Yes	No
Wi-Fi	No	No
Pop-up flash	Yes	Yes
Viewfinder	Pentaprism, 1x, 100%	Pentaprism, 1x, 100%
Memory card	CF UDMA & SD, SDHC or SDXC (UHS-I)	CF UDMA
LCD	3in fixed 1,040k-dot	3in fixed 920k-dot
Max burst	10fps	8fps
Main body material	Magnesium alloy	Magnesium alloy
Size	149x112x78mm	148x111x74mm
Weight (body)	910 grams	820 grams
Price (body only)	£1,599 (RRP)	£750 (street price)

PhotoPlusVerdict

Enthusiast photographers tend to shoot a bit of everything and they need a versatile camera that can cope with a wide range of subjects and conditions. The EOS 7D Mark II is well equipped as a brilliant all-rounder, for everything from fast action to landscapes. Weatherproofing means that it can be used in harsher conditions than all Canon's other current D-SLRs (except the pro-level 1D X). Its new autofocus system and rapid 10fps burst will combine to instantly increasing your success rate when shooting moving subjects. The metering system, with its new 150,000-pixel RGB and infrared sensor, also delivers very well exposed images in a wide range of conditions. Noise is controlled well even at high ISOs, colours are pleasantly rendered and images have an impressive amount of detail for the camera's 20Mp pixel count. In all, the 7D Mk II is excellent, and certainly Canon's best APS-C model to date. The Mk II certainly makes a great upgrade from the original 7D, and from the 70D too. ■

PhotoPlusVerdict



High-ISO performance; new AF system; 10fps; top image quality, great ergonomics



Not Wi-Fi enabled; AF setup might baffle some; non-touch-sensitive or pivoting screen

97%



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AWARDS SPECIAL!

CANON GEAR OF THE YEAR 2014

Stand by to pop your cork as we unveil the *PhotoPlus* award-winners of the best Canon D-SLRs, lenses and accessories of the year...

The time of year is upon us for a bit of pomp and circumstance, red carpets and black ties, stretched limos and bottles of bubbly. As well as a riot of razzamatazz, for this year's Canon Gear of the Year awards we've searched out the classiest Canon D-SLR cameras, the most scintillating lenses, and the absolutely must-have accessories. Ultimately, we're on a mission to showcase the very best kit for Canon photographers, so you can get the most bang for your buck when parting with your hard-earned cash.

So what makes a *PhotoPlus* award winner? We've put well over 100 products through our tough testing regime over the past year – and that's just in our monthly Super Tests alone. Along the way, we've given awards each and every month for our 'Best On Test' and 'Best Value' kit.

But this is something different. Here, we're cherry-picking the gear that really stands out from the crowd, selecting the winners that have really stuck in the mind throughout 2014 for their excellence. There's something for

everyone, whether you're completely new to the world of digital photography, a seasoned enthusiast, or even a semi-professional starting to earn money from your passion. There's a wealth of eye-catching new products here, thanks to the relentless gallop of technical progress.

Equally important, there's classic kit that has stood the test of time, fending off newcomers to retain well-deserved accolades. So, without further ado, let's kick off with the beginners' category and start handing out the gongs... ►

BEGINNER

Canon EOS 1200D

WINNER: BUDGET D-SLR **PRICE: £280 (BODY ONLY)** **TESTED: ISSUE 85**

What we love: Despite its rock-bottom price, the 1200D is smart with a capital S. Not only does it feature the beginner-friendly Scene Intelligent Auto shooting mode, which analyses what you're shooting in real time, but there's also a free companion app for iOS and Android smartphones and tablets, which helps you learn about the camera and how to get the best out of

it. Overall, it's a simple but highly effective package that's compatible with Canon's full range of EOS lenses.

What's missing? It has an older generation image processor than the 100D and 700D, and a limited number of custom functions.

Upgrade if... You've been shooting on a compact camera or your mobile phone. D-SLRs are the way forward!



Lowepro Transit Backpack 350 AW

WINNER: PHOTO BACKPACK **PRICE: £100** **TESTED: ISSUE 88**

What we love: Sometimes it's hard to choose between a full photo backpack, and a split photo/daypack, or between a top-opening or side-opening bag. This Lowepro keeps all your choices open, making it fabulously easy to configure the backpack exactly how you want it. The way it pivots on one shoulder strap is also great, so you can grab your camera and accessories without even having to take the bag off and lay it down. There's also a rear compartment for 15-inch laptops.

What's missing? With dividers for up

to eight photographic items, it can't take quite as much kit as some bigger photo backpacks.

Upgrade if... Can't fit all your gear into a regular camera bag? This is the ideal backpack for your photographic journey.

Tamron SP 70-300mm f/4-5.6 Di VC USD

WINNER: BUDGET TELEPHOTO LENS **PRICE: £290** **TESTED: ISSUE 83**

What we love: Wrapped up in a strong and robust build, this lens delivers exceptional sharpness and contrast for a 'budget' telephoto zoom. Handling is great too, and its ring-type ultrasonic autofocus system is well able to keep pace with the action for sports and wildlife photography. It's compatible with all Canon D-SLRs but,

on APS-C bodies, gives a stonking effective telephoto reach of up to 480mm.

What's missing? The widest aperture isn't constant and it's not weather-sealed, but that's to be expected at the price.

Upgrade if... This is the perfect telephoto lens to supplement your first D-SLR and kit lens.



Sigma 10-20mm f/3.5 EX DC HSM

WINNER: ULTRA-WIDE LENS (APS-C) PRICE: £400 TESTED: ISSUE 87

What we love: There's a practically professional-level feel to this lens, complete with a constant-aperture design and super-fast, ring-type ultrasonic autofocus. It's completely brilliant for everything from cramped interiors to sweeping landscapes, when you want a really wide angle of view to squeeze everything in. The Sigma is also supremely sharp for

an ultra-wide lens, even into the extreme corners of the image frame.

What's missing? It loses out compared to Sigma's own 8-16mm lens for an absolutely jaw-dropping viewing angle.

Upgrade if... When you can't squeeze everything into the picture with your kit lens, this is the best buy.



Tamron 16-300mm f/3.5-6.3 Di II VC PZD

WINNER: SUPERZOOM LENS PRICE: £530 TESTED: ISSUE 92

What we love: This lens really puts the 'super' into superzoom. It goes both shorter and longer than competing lenses, giving a wider angle of view and greater telephoto reach respectively. Moreover, it delivers its class-leading 18.75x zoom range with remarkably little compromise in terms of image quality. As such, sharpness is good at all focal lengths, and distortions aren't too glaring either. Build quality is good and the Vibration Compensation system works well to combat camera-shake.

What's missing? It lacks ring-type ultrasonic autofocus but the motor-based system is pretty quick and – unusually – includes full-time manual override.

Upgrade if... It's simply the best walkabout or travel lens on the market for APS-C format D-SLRs, ideal if you want to shoot almost anything with a single lens.

Canon EOS 700D

WINNER: BEGINNER D-SLR PRICE: £479 TESTED: ISSUE 86

What we love: Compact and lightweight but rich in features and specifications, the 700D is the perfect novice's D-SLR. It's simple enough to use for absolute beginners, yet has plenty of sophistication that enables it to grow with you as you learn. Favourite features include a vari-angle touchscreen, wireless control for remote Speedlites and great high-ISO quality for low-light shots,

thanks to its late-generation DIGIC 5 image processor. There's also a nifty 'hybrid CMOS' autofocus system for movie capture.

What's missing? There's no Wi-Fi built in, nor a secondary LCD on the top panel for displaying shooting settings.

Upgrade if... You want better image quality and more advanced features, compared with the 1200D or 600D and older variants. ▶



Sigma 105mm f/2.8 EX DG OS HSM Macro

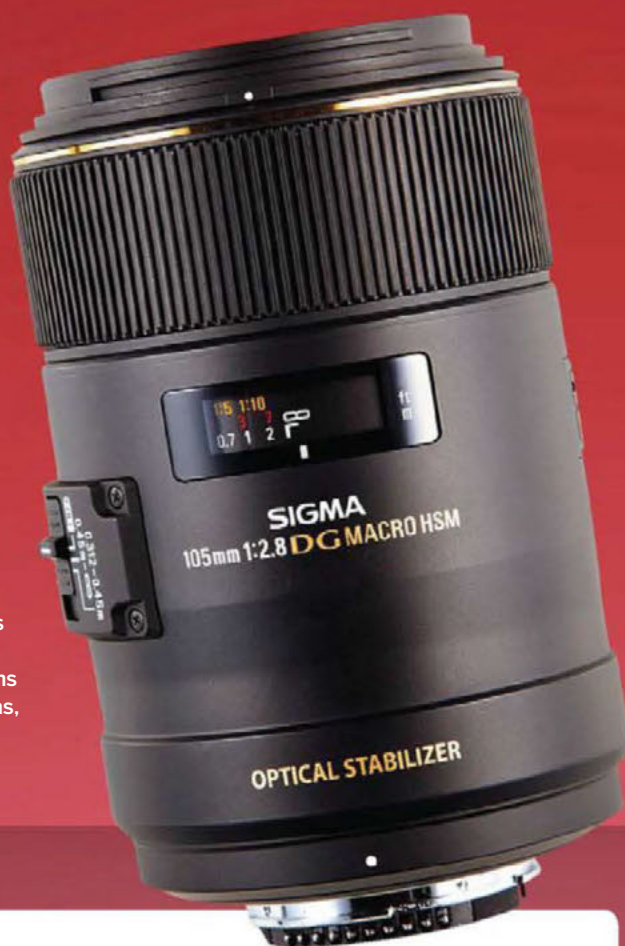
WINNER: MACRO LENS **PRICE: £380** **TESTED: ISSUE 85**

What we love: Simply stunning, this Sigma macro lens delivers incredible sharpness and contrast along with a full 1.0x macro magnification at its closest focus distance. It's only about half the price of the equivalent Canon lens, yet offers fabulous performance. It's a genuine dual-purpose lens too, with a super-fast ring-type ultrasonic autofocus system that makes it great

as a telephoto prime as well as a close-up specialist.

What's missing? Canon's 100mm macro has a 'hybrid' Image Stabilizer, which is claimed to be better for close-ups but, in practice, the Sigma's stabilisation works almost as well.

Upgrade if... It's the perfect macro lens for both APS-C and full-frame cameras, so you can be king of the close-ups.



Canon EOS 70D

WINNER: ENTHUSIAST APS-C CAMERA **PRICE: £815** **TESTED: ISSUE 86**

What we love: The 70D is a real game-changer. Its standout feature is a new Dual Pixel CMOS AF system that makes for speedy autofocus in Live View and movie shooting modes. This is made all the more useful by a brilliant vari-angle touchscreen, so you can simply point where you want to focus in a scene. In all other respects, handling is equally sublime, with a host of enthusiast-friendly controls, backed up by stellar image quality and a fast 7fps continuous drive mode.

What's missing?

Specifications are now outclassed by the new 7D Mk II (see our ultimate test on page 86), but the 70D is still exceptional value at the price.

Upgrade if...

Supreme image quality and sophisticated handling make this a great APS-C camera for any occasion.



Canon EOS 6D

WINNER: ENTHUSIAST FULL-FRAME CAMERA **PRICE: £1,300** **TESTED: ISSUE 86**

What we love: Barely any bigger and every ounce as light as the 70D, this is a full-on, full-frame D-SLR with a remarkably compact yet sturdy build. With a fairly modest resolution of 20.2Mp, for a full-frame camera at least, coupled with a late-generation DIGIC 5+ processor, low-light performance is mind-blowing. The sensitivity range is a mighty ISO100-25600, stretching even further to

ISO50-102400 in expanded mode. It's also the only Canon D-SLR to feature both Wi-Fi and GPS.

What's missing? The 70D's vari-angle screen and a full-frame version of its Dual Pixel CMOS AF sensor would be cool.

Upgrade if... You want shallower depths of field than you're getting from your APS-C camera.



Sigma 17-50mm f/2.8 EX DC OS HSM

WINNER: BEST VALUE STANDARD ZOOM LENS (APS-C) **PRICE: £310** **TESTED: ISSUE 84**

What we love: Canon makes some great APS-C lenses but its 'fast' standard zoom, the EF-S 17-55mm f/2.8 IS USM, is showing the signs of age and is pretty pricey at

nearly £600. This equivalent Sigma lens is unbeatable value, at little more than half the price, has a more effective image stabiliser, and delivers excellent image quality thanks to its pair of top-grade FLD (Fluorite-equivalent Low Dispersion) elements. It's a smart buy for any APS-C format body.

What's missing? The ultrasonic autofocus system is motor-driven rather than a ring-type affair, so the focus ring rotates during autofocus.

Upgrade if... You would like faster shutter speeds under dull lighting, and you want to blur backgrounds behind your subjects. ▶



Canon EF 50mm f/1.4 USM

WINNER: STANDARD PRIME LENS **PRICE: £280** **TESTED: ISSUE 93**

What we love: For such a fast, f/1.4 lens, the Canon 50mm is wonderfully compact and lightweight, at 74x51mm and 290g. To put that into perspective, Sigma's new 50mm f/1.4 Art lens is undeniably excellent but measures 85x100mm and weighs 815g. The Canon therefore reigns supreme as a standard prime lens that you can squeeze into a spare corner of your gadget bag and use in comfort any time, any place. It's a cracker for

blurring the background, creating a really dreamy look to defocused areas.

What's missing? It only has motor-based ultrasonic autofocus but, unusually for this type of system, the focus ring doesn't rotate during autofocus and there's the availability of full-time manual override.

Upgrade if... It's superb as a fast standard prime for full-frame cameras, and arguably even better as a portrait lens for APS-C bodies.



Sigma 18-35mm f/1.8 DC HSM A

WINNER: SPECIALIST LENS **PRICE: £640** **TESTED: ISSUE 90**

What we love: This is quite simply the finest standard zoom lens that we've ever seen for APS-C-format cameras, with an incredibly wide aperture of f/1.8 that remains constant throughout its entire zoom range. The 'effective' 28.8-56mm zoom range gives good wide-angle to standard-perspective coverage. The autofocus is ring-type ultrasonic, with the added bonus of full-time manual override.

What's missing? There's no image stabiliser, but that's entirely consistent with the extra-wide constant aperture of f/1.8.

Upgrade if... This lens will suit anyone who wants the image quality of two or three 'fast' prime lenses in a single, convenient zoom lens.



MeFOTO RoadTrip

WINNER: TRAVEL TRIPOD **PRICE: £160** **TESTED: ISSUE 89**

What we love: An easy-going travel companion, this combined tripod and ball head folds to just 40cm yet extends as high as 1.57m for lofty shooting. Similarly, it weighs in at just 1.65kg yet has a hunky maximum load rating of 8kg. Multi-angle legs and an easily invertible centre column add to the attractions and, better still, one of the legs can be quickly detached for use as a separate

monopod. To liven up your luggage, it's available in no less than 12 different colours.

What's missing? There are five sections in each leg rather than the more usual three or four, so setup time can be a little longer, but the design enables an extra-small stowage size.

Upgrade if... You want a tough and impressively rigid tripod that's small enough to take anywhere.

Nissin Di866 Mk II Professional

WINNER: ENTHUSIAST FLASHGUN **PRICE: £200 TESTED: ISSUE 91**

What we love: We do love a bit of oomph in our flashguns, especially when bouncing them off walls and ceilings. The Nissin's powerful Gn 60 rating gets it off to a great start, while extra luxuries include a secondary sub-flash tube for fill-in lighting, a motorised 24-105mm zoom, and full master/slave wireless compatibility. What's more, the colour menu screen is easy on the eye and

makes even the most advanced functions quick, easy and intuitive to use.

What's missing? It takes twice as long as the Canon 430EX II to recycle after a full-power flash but, then again, it's much more powerful.

Upgrade if... Amazing value considering its professional range of features, which include master/slave wireless and a stroboscopic flash mode.



Tamron SP 150-600mm f/5-6.3 Di VC USD

WINNER: ENTHUSIAST SUPER-TELEPHOTO LENS **PRICE: £950 TESTED: ISSUE 94**

What we love: At almost 2kg in weight, the mere act of fitting this lens to your camera and lifting it to your eye makes you feel quite the action hero. Indeed, action heroics are what it does best, with super-speedy autofocus and a humongous telephoto

reach that's brilliant for sports, wildlife and any other time you need to shoot from distance. Image quality is maintained really well even at the very longest zoom setting, which is extravagant on full-frame cameras and equates to a monstrous 960mm on an APS-C body.

What's missing? The widest available aperture is only a modest f/6.3 at the long end of the zoom range but this helps to avoid the lens being too enormous.

Upgrade if... Incredible telephoto reach combined with a reasonable price tag make this a hard lens to resist. ►



SEMI-PRO

Canon Speedlite 600EX-RT

WINNER: PROFESSIONAL FLASHGUN **PRICE: £465** **TESTED: ISSUE 91**

What we love: Big and imposing, the 600EX-RT has a monster motorised zoom range of 20-200mm, along with beefy GN 60 power rating, and adds all the high-end features you could possibly want, along with fast and silent recycling. Great on its own, it's even better when paired with a second

600EX-RT flashgun, where RF (radio frequency) remote triggering enables communication even around obstacles, so you're not limited to 'line of sight'. In a paired-up master/slave configuration, you can even fire the camera from a remote flashgun.

What's missing? Remote firing of the camera from a single remote flashgun is unavailable, unless you buy an ST-E3-RT radio trigger for £240.

Upgrade if... You want premium build quality, extra flash power and seamless integration with Canon cameras.



Manfrotto 055CXP Pro3

WINNER: CARBON FIBRE TRIPOD **PRICE: £360** **TESTED: ISSUE N/A**

What we love: We actually tested this tripod for our sister publication, *Digital Camera* magazine, and it proved something of a holy grail in terms of lightness and stability. What you get here is a tripod that's lightweight enough to carry easily, at 1.65kg, yet is absolutely rock-solid in use, even when loaded to its 8kg maximum rating. If you ever needed a reason to upgrade to a carbon fibre tripod,

rather than settling for aluminium, this is it.

What's missing? The pivoting centre column is ace for macro and ultra-wide shots, but can only be used in vertically upright or horizontal orientations, rather than swinging through a complete 180 degrees.

Upgrade if... Ideal for the great outdoors, it's light enough to travel, yet sturdy enough to give unflappable support.

Sigma 24-70mm f/2.8 EX DG IF HSM

WINNER: BEST VALUE STANDARD ZOOM LENS (FULL-FRAME) **PRICE: £595** **TESTED: ISSUE 84**

What we love: A real bargain, this is the full-frame equivalent of the Sigma 17-50mm f/2.8 lens for APS-C format cameras. Upgrades over the other Sigma lens include the fitment of nine diaphragm blades rather than seven, which helps to give a smoother quality to defocused areas within images. Autofocus is also quicker, quieter and has full-time manual override, being

based on a ring-type rather than motor-driven ultrasonic system. Overall, it's a lovely 'fast' standard zoom at an unbeatable price.

What's missing? Unlike the equivalent Tamron 24-70mm f/2.8 lens, it has no image stabilisation or weather-seals.

Upgrade if... A money-saving choice if you want a fast standard full-frame zoom.



Canon EOS 5D Mk III

WINNER: BEST VALUE PROFESSIONAL D-SLR **PRICE: £2,300** **TESTED: ISSUE 86**

What we love: Think fully professional camera body and you're probably thinking of something massive, in terms of both size and cost. Despite its pro credentials, the 5D Mk III is only about two-thirds the size and weight of the mighty 1D X and it costs less than half the price. Even so, it has the same 61-point autofocus system, the same generation of DIGIC 5+ image processing, and boasts a higher pixel count of 22.3Mp. In short, it's a pro camera that delivers pro image quality, in a package that's refreshingly convenient

to carry anywhere. It's a bit of a bargain too.

What's missing? With one rather than two DIGIC 5+ processors, it loses out to the 1D X with a maximum burst rate of 6fps compared with the bigger camera's 12-14fps.

Upgrade if... It's the best route to fully professional performance and build quality, without spending silly money.



Canon EF 70-200mm f/2.8L IS II USM + EF 2x III Extender

WINNER: TELEPHOTO/SUPER-TELEPHOTO LENS **PRICE: £1,700 + £330** **TESTED: ISSUE 94**

What we love: It's not exactly unique, as Sigma sells a 70-200mm f/2.8 lens plus a 2x teleconverter, as does Tamron with Kenko teleconverters. We tested all of these combinations in last month's Super Test. What's exceptional about the Canon pairing is that the EF 70-200mm is fantastically great on its own, and that the impact on image quality and autofocus speed is minimal when adding the 2x extender. It's also the only combination of lens plus teleconverter that enables weather-sealed operation.

What's missing? Nothing really, it's a great fast telephoto zoom with extra reach when needed.

Upgrade if... It'll give you the best of both worlds, without having to buy a telephoto zoom plus a super-telephoto zoom. But it'll make a big dent in your holiday fund! ►



SEMI-PRO



Tamron SP AF 24-70mm f/2.8 Di VC USD

WINNER: STANDARD ZOOM LENS (FULL-FRAME) PRICE: £800 TESTED: ISSUE 84

What we love: Canon's EF 24-70mm f/2.8L II USM pro-level standard zoom is fiendishly expensive at £1,550 and it lacks image stabilisation. At just over half the price, this equivalent Tamron lens matches the Canon pretty much stride for stride. It boasts fast, ring-type ultrasonic autofocus, premium build quality complete with weather-seals, sublime handling and spectacular image quality. And it also goes the extra mile by adding a

very effective image stabiliser that makes handheld shooting much more assured, even under very dull lighting conditions.

What's missing? In-camera corrections for peripheral illumination and lateral chromatic aberrations are unavailable.

Upgrade if... Compared with the Canon 24-105mm f/4 kit zoom lens, this one is an f/stop faster and delivers sharper image quality with less distortion.

Canon EOS-1D X

WINNER: PROFESSIONAL D-SLR PRICE: £4,850 TESTED: ISSUE 86

What we love: It's like the camera equivalent of a super-computer. Decked out with two DIGIC 5+ image processors, the 1D X can shoot at an incredible 12fps, or even 14fps if you don't need updated autofocus and metering after the first shot in a sequence. More than just a speed merchant though, this powerhouse is built like a tank and, with its integral vertical grip, feels every bit as natural for portrait-orientation shooting as it does in landscape-orientation mode.

What's missing? It's a shame there's no built-in Wi-Fi for uploading images or for remote camera control.

Upgrade if... If money's no object and you want the best camera on the planet, buy this one.



What we'd like to see in 2015...

Canon EOS 800D

One thing that's definitely lacking in the 700D is built-in Wi-Fi. We'd like to see this implemented in the 800D, to enable easy sharing of images while you're out and about, as well as remote control of the camera via a smartphone or tablet. It would also be cool to see intelligent viewfinder info added, like the 70D's levelling aid, and the filtering down of the 70D's 19-point autofocus system, along with a Dual Pixel CMOS AF sensor.



Canon EOS 80D

The 70D is a tough act to follow but we'd love to see an 80D that inherits the 7D Mk II's more high-tech 65-point autofocus system and 150k pixel metering sensor. It would also be nice to see a redesigned body that incorporates dual memory card slots. These are great for creating backups while shooting, or for separating Raw and JPEG quality images. An upgrade to DIGIC 6 processing would also enable a greater sensitivity range of up to ISO51200 in expanded mode.



More Wi-Fi

Wi-Fi has been adopted in all sorts of gadgets to great effect, and we don't see why cameras should be any different. We'd like Wi-Fi to be incorporated into all future Canon D-SLRs, to enable easy sharing of photos via Canon Image Gateway and social media sites. It would also be great if all forthcoming D-SLRs could be remotely and wirelessly operated via a PC, Mac, smartphone or tablet.



Canon EF 14-24mm f/2.8L

The EF 16-35mm L-series lens is great for wide-angle photography on full-frame cameras. However, its widest angle of view can still feel a little limiting and Canon doesn't offer anything wider without switching from rectilinear to curvilinear (fisheye) optics. The EF 14-24mm should fill the gap admirably.



Canon EF 24-105mm f/3.5-5.6 IS STM

We've grown to love STM (Stepping Motor) lenses like the EF-S 18-55mm, EF-S 18-135mm and EF 40mm. The STM lenses have practically silent autofocus. They're also brilliant for shooting movies with autofocus, as there's a smoother transition between focusing. And this new, more affordable 24-105mm will be great for both APS-C and full-frame D-SLRs.



Compact System Cameras

The EOS M is a much improved camera following its V2 firmware update, which dramatically increases autofocus speed. Even so, it's still the only compact system camera available from Canon. We'd like to see more of these small, lightweight and travel-friendly cameras, with a growing range of lenses to match. ■



Nissin
The art of light

Power beyond its size

The new Nissin i40 mini flash.

Introducing Nissin's new pocket size flashgun, the i40. Weighing in at just 203g and measuring only 85mm high, this high specification flash is ideal for travelling.

Although compact, the i40 packs a real punch with a guide number of GN40 at ISO100. It boasts an auto zoom range of 24 – 105mm (16mm with built in diffuser) and supports up to 1/8000th second shutter speed. Other features include LED video light function, Wireless TTL and a bounce and swivel head - all wrapped up in a stylish design with easy to use intuitive controls.

The i40 is available in Canon, Nikon, Sony, Four Thirds and Fuji fit.

Visit www.kenro.co.uk to find out more.

i40



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Lowepro Pro Trekker 450 AW

Web: www.lowepro.co.uk
Price: £325

The Pro Trekker AW Series comes in two models: the 450 and 650, which is perfect for carrying bigger loads. Designed with the MaxFit System of adjustable dividers, for easy-to-adjust customisation, you can be sure of a snug fit to protect your gear. As well as this, you can carry your kit in maximum comfort with the ActivLift heavy-load-lifting harness system, that's constructed to mimic the natural 'S' curve of your back, so you can trek further and in more comfort than ever before.



Joby Gorillapod Focus Tripod

Web: www.joby.com **Price:** £100

The Gorillapod Focus provides the stability of a standard tripod at a fraction of the size and weight – it's only 0.5kg, with a maximum weight capacity of 5kg. Machined aluminium sockets, in an anodized gunmetal finish, offer incredible flexibility while ensuring a rock-solid hold in almost any environment. Securely mount pro D-SLRs or use with a tripod head, such as the Joby Ball Head X, with a universal stainless steel 1/4in tripod screw or the included 3/8in adapter.

ESSENTIAL LANDSCAPE KIT

Take your landscape photography to the next level by investing in this little lot for your next foray into the great outdoors...

Sigma Wide-Angle Lens

Web: www.sigma-imaging-uk.com **Price:** £349

The Sigma 10-20mm f/4-5.6 EX DC HSM lens allows enjoyment of super-wide-angle photography and is a very powerful tool for landscape photography when used on digital SLRs with APS-C-size image sensors. An incredibly wide angle of view offers the photographer greater freedom of expression.



Hoya Pro-ND Filters

Web: www.hoyafilters.co.uk **Price:** From £32 (49mm Pro-ND 4)

Ever wanted to capture movement in your photography? Hoya's PRO ND neutral density filters create dramatic effects for soft blurry clouds, misty waterfalls and dramatic seascapes. ND filters aren't just for blurring the elements; a long exposure can make moving objects disappear, and with a wide aperture you can create stunning portraits with soft backgrounds. PRO-ND filters feature ACCU-ND technology, for a neutral colour balance. The range features nine filters, from a two-stop (PRO ND4) to a 10-stop (PRO ND1000) light reduction, and is available in 49mm to 82mm sizes.

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Canon

EOS M



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Canon EOS 700D



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Canon EOS 70D



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Canon EOS 7D



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Canon EOS 7D Mk II

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Canon EOS 6D



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Canon EOS 5D Mk III



5D Mark III From **£2299**

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5D Mk III + 24-105mm f4.0L IS USM **£2899**
5D Mk III + 24-70mm f2.8 II **£3799**

CUSTOMER REVIEW: 5D Mark III Digital SLR Camera Body
★★★★★ "Excellent and 1st impressions count" (Aner - north united)

Canon EOS 1D X



1D X Body **£4845**

1D X Body **£4845**

CUSTOMER REVIEW: 1D X Digital SLR Camera Body
★★★★★ "A brilliant piece of kit" (Steve P - Salford, North Yorkshire)

DSLR Lenses - Canon, Sigma & Tamron

Canon



EF 40mm f2.8 STM **£134** Inc. Cashback*
Price you pay today **£159**



EF 200-400mm f4 L IS USM with internal 1.4x extender **£8749**



EF 24-70mm f2.8 L USM II **£1549**



EF 70-200mm f2.8 L IS USM II **£1699**

Sigma



35mm f1.4 DG HSM **£649**

Tamron



70-200mm f2.8 SP Di VC USD **£1089** RRP £1649.99

CANON	EF 14mm f2.8 L II USM	£1669
CANON	TS-E 17mm f4.0 L	£1659
CANON	EF 20mm f2.8 USM	£409
CANON	EF 24mm f1.4 L USM II	£1224
CANON	NEW EF-S 24mm f2.8 Pancake	£179
CANON	EF 24mm f2.8 IS USM	£458
CANON	EF 28mm f1.8 USM	£379
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CANON	TS-E 45mm f2.8	£1129
CANON	EF 50mm f1.2 L USM	£1146
CANON	EF 50mm f2.5 Macro	£203.60
CANON	EF-S 60mm f2.8 USM Macro	£303.26
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CANON	MP-E 65mm f2.8 1-5x Macro	£348.25
CANON	EF 85mm f1.2 L USM II	£1549
CANON	EF 100mm f2.8 L IS USM Macro	£699
CANON	EF 135mm f2.0 L USM	£768
CANON	EF 180mm f3.5 L USM Macro	£1109
CANON	EF 200mm f2.8 L USM II	£569
CANON	EF 300mm f4.0 L IS USM	£1079
CANON	EF 400mm f5.6 L USM	£989
CANON	NEW EF 400mm f4.0 DO IS USM II	£6999
CANON	EF 500mm f4.0 L IS USM II	£7049
CANON	EF 8-15mm f4.0 L USM Fisheye	£998
CANON	EF-S 10-22mm f3.5-4.5 USM	£403
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Price you pay today		£448

CANON	EF-S 15-85mm f3.5-5.6 IS USM	£579
CANON	EF 16-35mm f2.8 L USM II	£1169
CANON	EF 17-40mm f4.0 L USM	£594
CANON	EF 17-55mm f2.8 IS USM	£531
Including £45 Cashback*		
CANON	EF-S 17-85mm f4.0-5.6 IS USM	£356
CANON	EF-S 18-55mm f3.5-5.6 IS STM	£188
CANON	NEW EF-S 18-135mm f3.5-5.6 IS STM	£334
Including £25 Cashback*		
CANON	EF-S 18-200mm f3.5-5.6 IS	£359
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CANON	NEW EF 24-105mm f3.5-5.6 IS STM	£479
CANON	EF 24-105mm f4.0 L IS USM	£727
CANON	EF 28-135mm f3.5-5.6 IS USM	£359
CANON	EF 28-300mm f3.5-5.6 L IS USM	£1899
CANON	EF-S 55-250mm f4.0-5.6 IS II	£208
CANON	EF 70-200mm f4.0 L IS USM	£879
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CANON	EF 70-300mm f4.0-5.6 L IS USM	£1069
CANON	EF 75-300mm f4.0-5.6 USM II	£209
CANON	EF 100-400mm f4.5-5.6 L IS USM	£1239
CANON	EF 1.4x III Extender	£329
CANON	EF 2x III Extender	£329

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Sigma - Canon Fit Lenses		
Sigma	50mm f1.4 EX DG HSM	£329
Sigma	85mm f1.4 EX DG HSM	£649
Sigma	105mm f2.8 APO EX DG OS HSM Macro	£379
Sigma	10-20mm f3.5 EX DC HSM	£399
Sigma	10-20mm f4.0-5.6 EX DC HSM	£349
Sigma	17-70mm f2.8-4 DC Macro OS HSM From	£249
Sigma	NEW 17-70mm f2.8-4 DC OS	£329
Sigma	18-200mm f3.5-6.3 DC OS HSM II	£239
Sigma	18 250mm f3.5-6.3 DC OS HSM Macro	£295
Sigma	NEW 18-300mm f3.6-6.3 DC Macro	£499
Sigma	70-300mm f4.0-5.6 Macro DG	£98
Sigma	NEW 120-300mm f2.8 OS	£2799
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Sigma	NEW 150-600mm f5.0-6.3 S DG OS HSM	£1599

Tamron - Canon Fit Lenses		
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TAMRON	180mm f3.5 SP AF Di Macro	£698
TAMRON	17-50mm f2.8 XR Di II VC	£349
TAMRON	18-270mm f3.5-6.3 Di II VC PZD	£279
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Price you pay today		£329
TAMRON	28-75mm f2.8 XR Di Lens	£359
TAMRON	70-300mm f4.0-5.6 SP Di VC USD	£289

Tamron Cashback* ends 31.12.15

Canon DSLR Accessories

Canon EOS 700D

BG-ER	LP-ER	DigCover	HL-ER	ACK-ER	RS-60E3	RC-6	HTC-100	IFC-200U	Angle Finder C	EP-EK1SE	Frame EF	DioSeries	CUP-ER	EW-1000BII	EH-19L
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Canon EOS 60D

BG-E9	LP-E9	CBC-E9	LC-E9C	HL-E9	ACK-E9	RC-6	HTC-100	AUC-DC400E1	Angle Finder C	Eyecup ED	Focusing Screen EF-0	Hand Strap E2	EW-405600	EH2-L	106G
£149	£64.95	£152.99	£43.99	£29	£109.99	£14.99	£46.99	£20.99	£109.99	£6.49	£22.99	£29.99	£19.99	£19.99	£69.99

Canon EOS 7D

BG-E7	LP-E9	CBC-E9	HL-E9	ACK-E9	RS-60E3	RC-6	HTC-100	IFC-300U	Angle Finder C	Anti-Fog Eyecup EG	Encap EG	WFF-E10	Hand Strap E2	EW-1000BII	106G
£149	£64.95	£152.99	£29	£109.99	£39	£14.99	£46.99	£29.99	£109.99	£30.99	£14.99	£41.5	£29.99	£19.99	£69.99

Canon EOS 5D Mk II

RC-F11	LP-F8	CBC-F8	HL-F8	ACK-F8	RS-80N3	LC-S 50H	HTC-100	IFC-200U	Angle Finder C	Anti-Fog Eyecup EG	Encap EG	Focusing Screen EF-0	WFF-F78	17 Strap	106G
£249	£64.95	£152.99	£29	£109.99	£39	£349.99	£46.99	£17.99	£109.99	£30.99	£6.49	£30.99	£599	£18.49	£69.99



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SanDisk Ultra SDHC Class 6 30MB/s

4GB 30MB/s	£5.99
8GB 30MB/s	£6.99
16GB 30MB/s	£10.99
32GB 30MB/s	£19.99

SanDisk Extreme SDHC Class 10 UHS-1, 30 & 45MB/s

4GB 30MB/s	£7.99
8GB 30MB/s	£9.99
16GB 45MB/s	£14.99
32GB 45MB/s	£26.99
64GB 45MB/s	£57.99

NEW SanDisk Extreme 80 SDHC UHS-1 Class 10 80MB/s

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32GB 80MB/s	£42.99
64GB 80MB/s	£84.99

SanDisk Ultra Compact Flash 30MB/s

4GB 30MB/s	£13.99
8GB 30MB/s	£19.99
16GB 30MB/s	£34.99

SanDisk Extreme Compact Flash 60MB/s

8GB 60MB/s	£27.99
16GB 60MB/s	£45.99
32GB 60MB/s	£76.99
64GB 60MB/s	£139.99

SanDisk Extreme Pro Compact Flash 90MB/s

16GB 90MB/s	£72.99
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SanDisk Ultra MicroSDHC Class 10 30MB/s

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16GB 30MB/s	£12.99
32GB 30MB/s	£24.99
64GB 30MB/s	£48.99

SanDisk Cruzer Blade USB Pen Drives

8GB USB 2.0	£4.99
16GB USB 2.0	£7.99
32GB USB 2.0	£15.99

Lexar

Lexar Professional SDHC Class 10, UHS-1 400X, 60MB/s

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16GB 60MB/s	£17.99
32GB 60MB/s	£32.99

Lexar Professional Compact Flash 800X, 120MB/s

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32GB 120MB/s	£69.99

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USB3.0 Reader 300MB/s **£25.99**

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CF Tote Holds 4 Compact Flash	£6.99

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NB-5L for Canon	£9.99
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NB-7L for Canon	£12.99
NB-9L for Canon	£9.99
NB-10L for Canon	£12.99
NB-11L for Canon	£12.99
BP-511 for Canon	£12.99
LP-E5 for Canon	£12.99
LP-E6 for Canon	£15.99
LP-E8 for Canon	£15.99
LP-E10 for Canon	£12.99
LP-E12 for Canon	£12.99
NP45 for Fuji	£9.99
NP50 for Fuji	£9.99
NP95 for Fuji	£9.99
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EN-EL9 for Nikon	£12.99
EN-EL10 for Nikon	£9.99
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EN-EL20 for Nikon	£14.99
EN-EL21 for Nikon	£14.99
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DMW-BMB9 for Panasonic	£22.99
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D-L190 for Pentax	£12.99
D-L109 for Pentax	£12.99
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For Canon 550D	£84.99
For Canon 600D	£84.99
For Canon 650D	£84.99
For Canon 700D	£84.99
For Nikon D600	£84.99
For Nikon D800/D800E	£84.99
For Nikon D7000	£84.99

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AA 2300mAh Energizer Extreme (4)	£8.99
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AA 2900mAh Delkin (4)	£9.99
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AAA 1900mAh Duracell (4)	£6.99
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49mm	£4.99
52mm	£4.99
55mm	£5.99
58mm	£6.99
62mm	£7.99
67mm	£8.99
72mm	£9.99
77mm	£11.99
82mm	£14.99
86mm	£19.99

KODAK

Slim Frame Circular Polarising Filters

46mm	£12.99
52mm	£14.99
55mm	£15.99
58mm	£17.99
62mm	£19.99
67mm	£22.99
72mm	£26.99
77mm	£29.99
82mm	£34.99
86mm	£39.99

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Close Up Filter Sets (+1, +2 & +4)

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Slim Frame Multicoated Clear Protection Filters

46mm	£10.99
49mm	£10.99
52mm	£10.99
55mm	£11.99
58mm	£12.99
62mm	£14.99
67mm	£15.99
72mm	£17.99
77mm	£19.99
82mm	£22.99

Marumi DHG

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58mm	£15.99
62mm	£17.99
67mm	£19.99
72mm	£21.99
77mm	£24.99

Marumi DHG

Slim Frame Multicoated Circular Polarising Filters

52mm	£31.99
58mm	£35.99
62mm	£39.99
67mm	£44.99
72mm	£49.99
77mm	£54.99
82mm	£69.99

Hoya HMC

Slim Frame Multicoated UV Filters

37mm	£12.99
46mm	£12.99
52mm	£11.99
58mm	£14.99
62mm	£16.99
67mm	£18.99
72mm	£21.99
77mm	£25.99
82mm	£29.99

Hoya Pro-1 Digital

Slim Frame Multicoated Circular Polarising Filters

52mm	£27.99
58mm	£32.99
62mm	£35.99
67mm	£39.99
72mm	£44.99
77mm	£49.99
82mm	£56.99

Hoya Pro-1 Digital

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58mm	£60.99
62mm	£67.99
67mm	£75.99
72mm	£90.99
77mm	£99.99
82mm	£120.99

SQUARE FILTERS

KODAK P-Type Filter System

The P-Type square/rectangular filter system consists of three parts:

- 1) An adapter ring that screws onto the front of your lens
- 2) A filter holder clips onto the ring
- 3) One or more P-Type (84mm wide) filters

KODAK square filters are manufactured in the UK, and are fully compatible with the Cokin P-Type filter system

49mm Adapter Ring	£4.99
52mm Adapter Ring	£4.99
55mm Adapter Ring	£4.99
58mm Adapter Ring	£4.99
62mm Adapter Ring	£4.99
67mm Adapter Ring	£4.99
72mm Adapter Ring	£4.99
77mm Adapter Ring	£4.99
82mm Adapter Ring	£4.99
Standard Holder	£5.99
Wide Angle Holder	£6.99
Filter Wallet (hold 8 filters)	£9.99

Six-Piece ND Filter Kit

£43.99

Here's a kit which includes all the popular ND filters, and everything you need to get started! The kit contains: 1x ND2 Filter, 1x ND4 Filter, 1x ND8 Soft Graduated Filter, 1x P-Type Filter Holder, 1x P-Type Adapter Ring of your choice (49-82mm).

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A comprehensive range of aftermarket metal black bayonet-fit lens hoods for Canon, Nikon and Sony lenses.

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ET-65B Canon 70-300/4-5.6	£9.99
ET-67 Canon 100/2.8 Macro	£9.99
ET-67B Canon 60/2.8	£9.99
EW-60C Canon 18-55 IS	£7.99
EW-73B Canon 17-85 IS	£9.99
EW-78B Canon 28-135 IS	£9.99
EW-78D Canon 18-200 IS	£9.99
EW-78E Canon 15-85 IS	£12.99
EW-83C Canon 17-40/4.0	£12.99
EW-83J Canon 17-55/2.8	£12.99
HB-45 Nikon 18-55 VR	£7.99
SH-006 Sony 18-70/3.5-5.6	£9.99

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55mm Shaped Petal Hood	£6.99
58mm Shaped Petal Hood	£6.99
62mm Shaped Petal Hood	£7.99
67mm Shaped Petal Hood	£7.99
72mm Shaped Petal Hood	£9.99
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52mm Rubber Hood	£3.99
58mm Rubber Hood	£3.99
62mm Rubber Hood	£4.99
67mm Rubber Hood	£4.99
72mm Rubber Hood	£5.99
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Step-Up and Step-Down Rings

Stepping rings are used to "step-up" or "step-down" from one filter thread size to another.

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37-43mm	52-58mm	58-62mm	67-77mm
43-46mm	55-52mm	58-67mm	72-77mm
46-49mm	55-58mm	62-67mm	72-77mm
49-52mm	58-52mm	62-72mm	77-72mm

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Canon, Nikon, Sony, Olympus and Pentax. Sizes from 52mm to 77mm.

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Load: 7.0kg
Folded: 65cm
Height: 165cm

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Model - Ashlea Louise.



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NEXT ISSUE

Don't miss our February issue!

BETTER PORTRAITS!

CANON LENS SKILLS

Next month learn all you need to know to get the best out of your lenses to capture beautiful portraits, from lens selection and setup to key D-SLR techniques

PLUS...

- **Stunning studio flash photography!** Our Apprentice spends a day in the studio learning how to capture professional-looking shots of motorbikes by simply using off-camera flashguns
- **Canon Lens Buyers' Guide!** Fully updated for 2015, we bring over 140 Canon-fit lenses from Canon, Sigma, Tamron, Tokina and Samyang
- **Bonus gift!** *Landscape Photography Field Guide* eBook worth £8.99!
- **Canon EOS Workshop** What the hell is a histogram?
- **New D-SLR + Photoshop projects** How to shoot and edit a moonlit landscape, fantastic frosty scenic shots, plus part seven of our Photoshop CC video and tutorial series is on common photo fixes



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My favourite shot

How sports photographer Marc Aspland captured this snowy horse racing shot by riding his luck on the day!



Marc Aspland

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Location Harpenden,
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Pro for 28 years

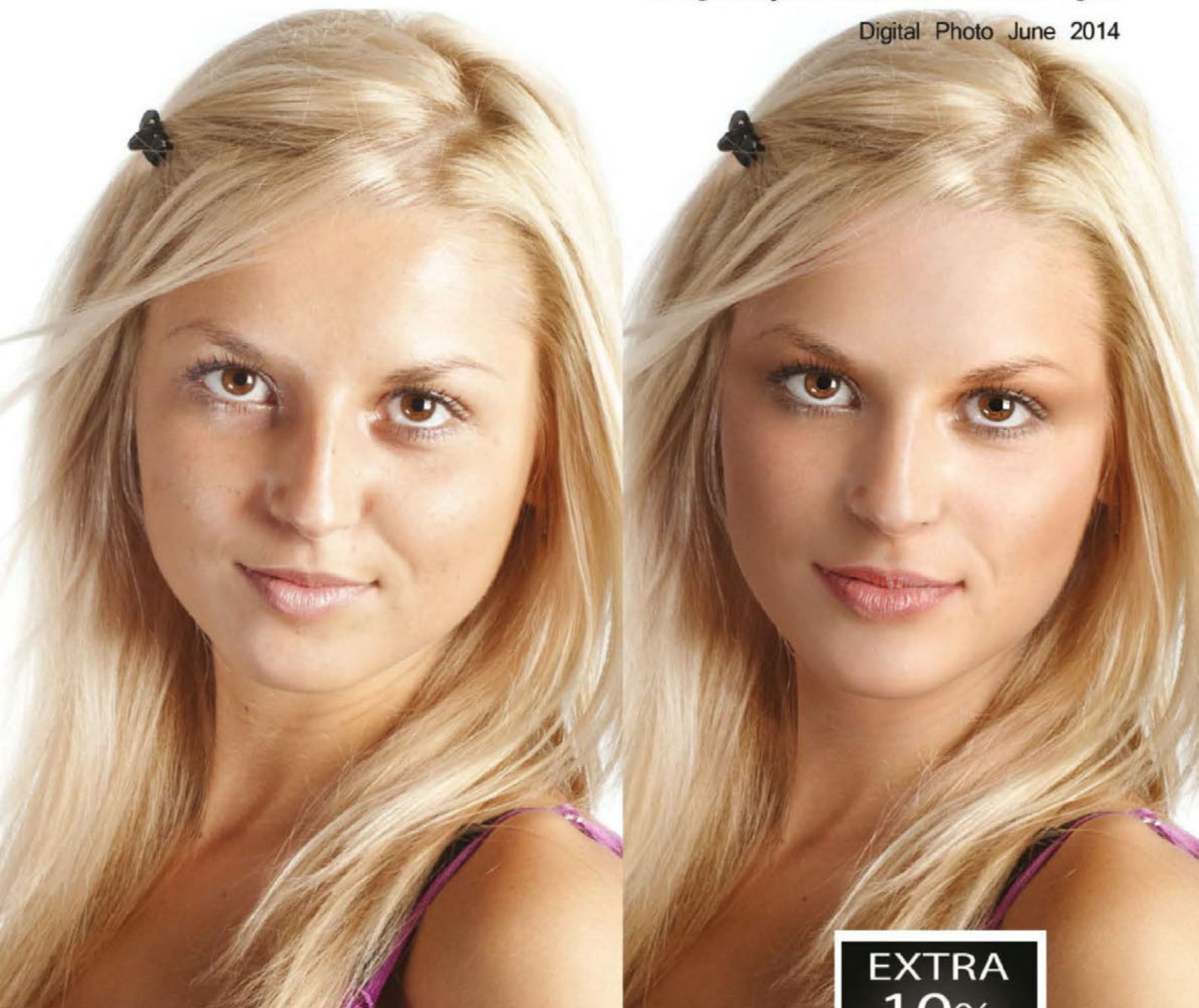
“ When choosing a ‘wrap’ cover for my book *The Art of Sports Photography* (£29.99; www.marcaspland.com/booktease.html), the ‘White Turf of St Moritz’ was the favourite by a furlong. I had travelled to St Moritz, Switzerland, to cover a story about the GB rowing squad using the vast hills as a winter training camp in preparation for the 2008 Beijing Olympics. Lady Luck seemed to be on my side as the 101st running of the ‘White Turf’ – the European Snow Meeting on the frozen lake at St Moritz – just happened to be running at the very same time.

The event is both unique and utterly compelling. Its 30,000 ‘guests’ delight in the spectacle of fine thoroughbreds racing on the frozen expanse against the magnificent backdrop of the mountains of the Engadine. The festival ends with the running of a frozen equivalent of Royal Ascot.

The late afternoon light was glorious as the runners and riders fought for victory as a tight pack on the final corner, leading to the finishing straight. I used a Canon EOS-1D Mk II N – and its 8.5fps burst rate – with a Canon 400mm super-telephoto lens. Laying flat on the icy surface for a clean low angle, I set the ISO to 250 for a shutter speed of 1/3200 sec to freeze the action, resulting in an f/7.1 aperture.

I had done my homework on the best position and lenses but, in sports photography, there is no opportunity to ask for the race to be run again. You stack your chances of good planning and the right choices to allow luck to play a small part in a frame taken at 1/3200 sec. As the riders hurtled towards the line, there was just a single frame where all the horses seemed to be suspended over the ice; I knew that Lady Luck was on my side that day.





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Issue 94 December 2014

Depth of field made easy! Learn the easy way to control depth of field by using our essential aperture, focusing and focal length techniques

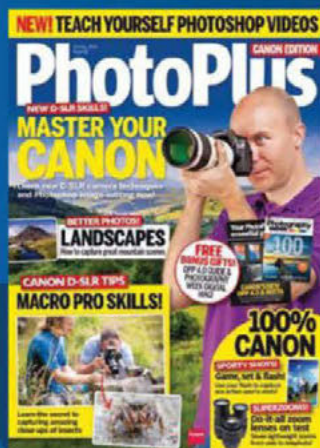
- Apprentice: Shoot the city night lights
- D-SLR eight-page buyers' guide
- Super Test: big telephoto zoom lenses
- Help me buy a... tripod head
- Workshop: picture styles
- Masterclass: shoot in the twilight zone
- Free! Sharper shots mini-mag



Issue 93 November 2014

Essential D-SLR settings! Key Canon camera controls that will instantly improve your shots

- Apprentice: dazzling dance photos
- EOS 7D Mk II eight page guide
- Super Test: standard lens upgrades
- Help me buy a... screen shade
- Workshop: In-camera Wi-Fi
- Masterclass: get the best from your lenses
- Photo projects: brilliant black-and-white images plus capture close-ups of eyes



Issue 92 October 2014

Mountain landscapes! Climb new heights with your Canon photography by capturing beautiful mountain scenes

- Apprentice: creepy crawly close-ups!
- Essential eight-page guide to Canon Digital Photo Professional 4.0 & Irista
- Super Test: superzoom lenses
- Help me buy a... camera strap
- Workshop: lens filters
- Masterclass: photograph the perfect sunset



Issue 91 September 2014

Outdoor Special! Canon D-SLR skills to capture the beauty in the natural world

- Apprentice: pro tips for sexy beach portraits
- Canon D-SLR Starter Guide: EOS settings
- Super Test: flashgun upgrades
- Help me buy a... wide-angle prime lens
- Workshop: white balance
- Masterclass: professional head shots
- Get creative with colour with our tasty photo projects



Issue 90 August 2014

Summer Skills! Capture your best shots of the summer with our easy D-SLR photography guides

- Perfect Wedding Portraits Guide
- Apprentice: How to shoot landmarks and landscapes
- Super Test: specialist lenses
- Workshop: dynamic range
- Canon D-SLR starter guide: Live View and LCD tips
- Masterclass: flattering portraits of mature subjects
- Help me buy a... ring flash



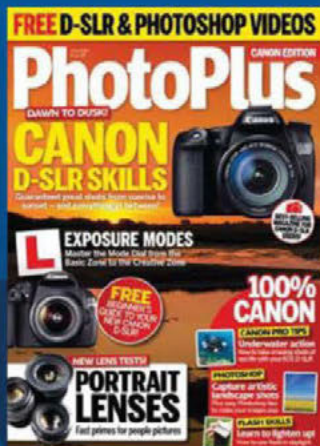
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Canon Raw secrets: Create your best-ever images with our simple Raw shooting and editing tips

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- Super Test: Travel tripods
- Workshop: Prepare for travel photography
- Canon D-SLR starter guide: Lenses and focusing
- Help me buy a... travel lens
- Masterclass: Shoot striking family profiles
- Take top shots at a local farm

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PhotoPlus BackIssues



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Issue 87 May 2014

Canon crash course! Fix your photographic faults fast with our essential new D-SLR techniques ● Canon EOS 1200D full test! ● Apprentice: London's modern architecture ● Super Test: Ultra-wide-angle lenses ● Workshop: How to make your EOS focus faster ● Canon D-SLR starter guide: Getting started ● Help me buy... a gimbal tripod head ● Masterclass: Shoot environmental portraits



Issue 86 Spring 2014

Photography road trip! Improve your D-SLR skills in a day trip as we shoot Wiltshire's hot spots... ● Apprentice: Take stunning scenes of bays and boats on the Cornish coast ● Super Test: Canon D-SLRs ● Workshop: Get set up for spring flower photos ● Canon D-SLR starter guide: Canon basics ● Help me buy... a reflector ● New projects: using ND filters ● High-speed flash photography



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Happy new Canon! We guarantee to help you become a better photographer ● Apprentice: Scenic forest photography ● Super Test: Budget telephoto zooms from £100 ● Workshop: Canon's metering modes explained ● 8 page guide to Creative close-up photography ● Help me buy a... fisheye lens ● Masterclass: capture traffic trails ● How to master Raw – stunning images in Elements



Issue 82 January 2014

Master your Canon lenses – get more from your glass with our essential advice! ● Apprentice: learn to shoot magical light trails ● Gear of the Year: 2013's best cameras, lenses and photo gear ● Workshop: capture spectacular night-time images ● Christmas wish list guide ● Help me buy a... shoulder bag ● Masterclass: create a wintry wonderland ● Create calendars and Christmas cards!



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